

SEMI-ANNUAL PROGRESS REPORT NUMBER 31

(Operating Period July 1 through December 31, 2010)

Prepared For:

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION.....	1
1.1 BACKGROUND	1
2.0 MONITORING, DATA VALIDATION, AND FIELD WORK.....	4
2.1 SITE-SPECIFIC PRELIMINARY REMEDIATION GOALS	4
2.2 MONITORING SUMMARY	5
2.3 DATA VALIDATION SUMMARY	7
2.4 FIELD WORK SUMMARY.....	7
3.0 SOIL VAPOR EXTRACTION SYSTEM	8
3.1 SYSTEM DESCRIPTION	8
3.2 MONITORING RESULTS.....	8
3.3 PROGRESS TOWARD REMEDIAL OBJECTIVES	9
4.0 GROUNDWATER EXTRACTION SYSTEM	10
4.1 SYSTEM DESCRIPTION	10
4.2 MONITORING RESULTS.....	10
4.3 PROGRESS TOWARD REMEDIAL OBJECTIVES	12
5.0 GROUNDWATER PRE-TREATMENT SYSTEM	20
5.1 SYSTEM DESCRIPTION	20
5.2 MONITORING RESULTS.....	20
5.3 PROGRESS TOWARD REMEDIAL OBJECTIVES	21
6.0 OFF-GAS TREATMENT SYSTEM.....	22
6.1 SYSTEM DESCRIPTION	22
6.2 MONITORING RESULTS.....	22
6.3 PROGRESS TOWARD REMEDIAL OBJECTIVES	23
7.0 INSTITUTIONAL CONTROLS.....	24
8.0 CONCLUSIONS AND RECOMMENDATIONS.....	26

TABLE OF CONTENTS (continued)

LIST OF TABLES

- | | |
|---------|---|
| Table 1 | Summary of Soil Vapor Extraction Air Flow Rates from the SE and AST Areas, July through December 2010 |
| Table 2 | Summary of Summa Canister Sampling for Soil Vapor Extraction Lines, October 2010 |
| Table 3 | Monitoring Well Analytical Results, October 2010 |
| Table 4 | Groundwater Treatment System Flow Summary |
| Table 5 | Summary of Groundwater Elevations |
| Table 6 | Recovery Well Analytical Results, October 2010 |
| Table 7 | Summary of Groundwater Treatment System Volatile Organic Compound Influent and Effluent Sampling |
| Table 8 | Summary of Treatment System Air Sampling |
| Table 9 | Summary of Air Dispersion Calculations |

LIST OF FIGURES

- | | |
|------------|--|
| Figure 1 | Site Plan – Groundwater Extraction & Treatment System and Slurry Wall |
| Figure 2 | Site Plan – Soil Vapor Extraction System |
| Figure 3 | Site Plan – Air Sparging System |
| Figure 4 | Summary of Groundwater Treatment and SVE Systems Combined Air System Effluent Data |
| Figure 5 | Cumulative and Sustained Groundwater Recovery |
| Figure 6 | Summary of Groundwater Treatment System Influent Data |
| Figure 7-1 | Groundwater Contours – July 2010 |
| Figure 7-2 | Groundwater Contours – August 2010 |
| Figure 7-3 | Groundwater Contours – September 2010 |
| Figure 7-4 | Groundwater Contours – October 2010 |
| Figure 7-5 | Analytical Results Summary – October 2010 |
| Figure 7-6 | Groundwater Contours – November 2010 |
| Figure 7-7 | Groundwater Contours – December 2010 |
| Figure 8 | Cumulative Volatile Organic Compounds Removed from Site – Soil and Groundwater Remediation Systems |
| Figure 9 | Summary of Site Volatile Organic Compound Removal Rates – Soil and Groundwater Remediation Systems |

TABLE OF CONTENTS (continued)

LIST OF APPENDICES

- Appendix A Landfill Sampling Data, October 2010 Sampling Event
- Appendix B Data Validation Report
- Appendix C Summary of Major Field Activities, July through December 2010
- Appendix D Historical Monitoring Data
 - Table D-1 Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
 - Table D-2 Monitoring Well Analytical Results
 - Table D-3 Columbia City Municipal Water Supply Well Results – Volatile Organic Compounds and Polychlorinated Biphenyls
 - Table D-4 Columbia City Municipal Water Supply Well Results – Metals and Inorganics
 - Table D-5 Recovery Well Analytical Results
 - Table D-6 Volatile Organic Compound Removal Rates – Soil Vapor Extraction and Air Stripper Systems
 - Table D-7 Summary of Groundwater Treatment System Effluent Sampling – Metals, Inorganics, and Polychlorinated Biphenyls
 - Table D-8 Summary of Treatment System Air Sampling
 - Table D-9 Summary of Air Dispersion Calculations
- Appendix E Summary of Air Dispersion Modeling and Cumulative Cancer Risk Calculations

ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
B&N	Burgess & Niple, Incorporated
CLP	Contract Laboratory Program
DCE	dichloroethene
gpd	gallons per day
gpm	gallons per minute
HDPE	high-density polyethylene
IDEM	Indiana Department of Environmental Management
InSite	InSite, Incorporated
ISC-LT	Industrial Source Complex – Long-Term
MWH	MWH Americas, Inc.
NFG	National Functional Guidelines
O&M	operation and maintenance
OM&M	operation, maintenance, and monitoring
Pace	Pace Analytical Services, Inc.
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
POTW	publicly owned treatment works
ppb	parts per billion
PRG	Preliminary Remediation Goal
QAPjP	Quality Assurance Project Plan
QC	quality control
RD/RA	Remedial Design/Remedial Action
scfm	standard cubic feet per minute
SE	Southeast
SVE	soil vapor extraction
U.S. EPA	United States Environmental Protection Agency
TCE	trichloroethene
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
v/v	volume per volume basis
VOC	volatile organic compound
VC	vinyl chloride
Weston	Roy F. Weston
WRR	Wayne Reclamation & Recycling

1.0 INTRODUCTION

This document is submitted on behalf of the Non-City Remedial Design/Remedial Action (RD/RA) Settlors. It is intended to summarize operations of the remediation system constructed by the Non-City RD/RA Settlors at the Wayne Reclamation & Recycling (WRR) Site (also known as the Wayne Waste Oil Site) located in Columbia City, Indiana for the reporting period of July 1 through December 31, 2010. Included in this document is a description of the system operation, assessment, and testing activities that have occurred during the reporting period. This document is organized as follows:

- *Section 2 Monitoring, Data Validation, and Field Work*
- *Section 3 Soil Vapor Extraction System*
- *Section 4 Groundwater Extraction System*
- *Section 5 Groundwater Pre-Treatment System*
- *Section 6 Off-Gas Treatment System*
- *Section 7 Institutional Controls*
- *Section 8 Conclusions and Recommendations*

This document is intended to supplement information presented in previous Semi-Annual Progress Reports.

1.1 BACKGROUND

Construction of the remediation system at the WRR Site took place between 1994 and January 1995. The remediation system was constructed to remove volatile organic compounds (VOCs) from soil and groundwater. The system includes:

- A 150-gallons-per-minute (gpm) design capacity groundwater extraction system, including a 1,600-foot-long, soil-bentonite cut-off wall (i.e., slurry wall).

- A groundwater treatment system consisting of an influent storage tank, an air stripping tower, and a 5,800-foot-long force main that delivers treated groundwater to the Columbia City publicly owned treatment works (POTW).
- A 2,400-standard-cubic-feet-per-minute (scfm) soil vapor extraction (SVE) system and a 100-scfm air sparging system (nominal rates). The air sparge system has met its design goals, and operation of the deep and shallow injection wells was suspended in September 2001 and November 2006, respectively.
- A 3,200-scfm off-gas treatment system, which was removed from service effective June 24, 1999.
- In addition to the remediation system, institutional controls have been designated to restrict property use.

The layouts for the three primary components of the remediation system, including the groundwater recovery, SVE, and air sparging system, are indicated on *Figures 1, 2, and 3*, respectively.

Additional information on the remediation system can be found in the following reports:

- *Final Design Evaluation* (November 19, 1993)
- *Interim Remedial Action Report* (August 1995)
- *Final Operation, Maintenance, and Monitoring (OM&M) Plan* (September 1995) and *Addendum* (July 1999)
- *Final Operations and Maintenance Quality Assurance Project Plan (O&M QAPjP)* (September 1995) and *Addendum* (July 1999)
- *Technical Memorandum Number One* (February 12, 1996)
- *Technical Memorandum Number Two* (November 1996)
- *Hydrological Assessment Letter Report, January through July 2003* (August 2003)

- *Hydrological Assessment Letter Report, July through December 2003*
(January 2004)
- *Semi-Annual Progress Report Numbers 3 through 30* (August 1997
through August 2010)

2.0 MONITORING, DATA VALIDATION, AND FIELD WORK

Summaries of the monitoring activities conducted, data validation report, and significant field events and activities are presented in the following sections.

2.1 SITE-SPECIFIC PRELIMINARY REMEDIATION GOALS

Development of the groundwater and soil site-specific Preliminary Remediation Goals (PRGs) is detailed in Appendix C of the *Final OM&M Plan* (Montgomery Watson, September 1995) and *Final O&M QAPjP* (Montgomery Watson, September 1995). Soil PRGs are specified based on the thickness of soil column and area of the Site. Soil compliance monitoring will begin when it is determined that an area likely meets the soil site-specific PRGs, as indicated by groundwater detections less than the groundwater site-specific PRGs. The five constituents listed in the following table were noted in the *Final OM&M Plan* to be the principal constituents of concern necessitating groundwater and soil remediation at the WRR Site. The table also lists the most conservative groundwater PRGs and soil PRGs for the entire soil column for the principal constituents of concern.

Principal Constituent of Concern	Groundwater PRG ($\mu\text{g}/\text{L}$)	Soil PRG for Entire Soil Column ⁽¹⁾ ($\mu\text{g}/\text{kg}$)			
		SE Area - North	SE Area - South	AST Area	MW-7S
Vinyl Chloride (VC)	0.0283	37.1	25.2	2.6	1,987.0
Tetrachloroethene (PCE)	1.43	67.1	1,811.6	44.2	4,796.0
Trichloroethene (TCE)	2.54	19.7	804.6	17.6	664
cis-1,2-Dichloroethene (cis-1,2-DCE)	70	--	--	--	--
trans-1,2-Dichloroethene (trans-1,2-DCE)	100	--	--	--	--
1,2-Dichloroethene, Total (1,2-DCE)	--	186.3	8,578.4	184.7	4,219.0

Notes: $\mu\text{g}/\text{L}$ = Micrograms per liter.

$\mu\text{g}/\text{kg}$ = Micrograms per kilogram.

 SE = Southeast.

 AST = Aboveground Storage Tank.

 -- = No PRG developed for this constituent.

⁽¹⁾ = PRGs were also developed for a one-foot soil column. The appropriate PRG should be used.

2.2 MONITORING SUMMARY

The primary monitoring activities conducted for the WRR Site remediation system include:

- The SVE system effluent samples are collected and analyzed for VOCs on a monthly basis. Laboratory analytical results of the SVE effluent sampling are used in air dispersion calculations.
- Samples of both the influent and effluent from the groundwater treatment system are collected monthly and analyzed for VOCs. The effluent samples are also analyzed for total metals, inorganics, and polychlorinated biphenyls (PCBs) during the expanded sampling event in October of each year. Laboratory analytical results from the groundwater treatment system sampling are used to monitor groundwater treatment system efficiency, and to provide effluent water quality information to the Columbia City POTW.
- Groundwater samples from recovery wells are collected and analyzed for VOCs on a periodic basis. Recovery wells RW-1, RW-3, RW-4, and RW-5 are sampled annually. Laboratory analytical results from recovery well sampling are used to monitor changes in aquifer groundwater concentrations and to assess VOC mass removal rates from the aquifer.
- Semi-annual groundwater sampling and analyses are conducted using the WRR Site monitoring well network. Typically, the semi-annual sampling is conducted in April and October of each year. Samples are analyzed for VOCs and metals. Laboratory analytical results from groundwater sampling are used to assess effectiveness of the remediation system operations and evaluate the progress toward attainment of remedial goals. During October 2010, samples were

collected from 13 WRR Site monitoring wells for analysis of VOCs and metals.

- Semi-annual groundwater elevation measurements are collected from 28 of the WRR Site's groundwater monitoring wells and piezometers, not including the landfill wells monitored by Columbia City and the ten WRR Site recovery wells. Typically, the semi-annual groundwater elevations are collected in April and October of each year. These data are used to evaluate groundwater flow patterns across the site. During October 2010, groundwater elevation readings were collected from the designated monitoring wells and piezometers.
- Monthly groundwater elevation measurements are collected from eight groundwater monitoring wells to evaluate the zone of hydraulic influence created by the groundwater remediation system and to assess horizontal and vertical hydraulic gradients within the SE Area.
- Annually, specific Columbia City municipal drinking water wells (Municipal Well Numbers 7 and 8 [referred to as PW-7 and PW-8, respectively]) are sampled during the expanded October sampling event; therefore, these wells were sampled during this reporting period.
- During this reporting period, groundwater wells located on or adjacent to the landfill (GM-1 through GM-4) were sampled by Burgess & Niple, Incorporated (B&N) of Columbus, Ohio. Their report (*Appendix A*) provides data for comparison to groundwater monitoring results from closely associated wells on the WRR Site.

The results from the above monitoring activities are discussed in the following sections of this report.

2.3 DATA VALIDATION SUMMARY

Groundwater, air, and associated quality control (QC) samples were collected from the WRR Site between July and December 2010. The water samples were analyzed by Pace Analytical Services, Inc. (Pace) of Indianapolis, Indiana for one or more of the following parameters: VOCs by U.S. EPA Method SW-846 8260B; dissolved metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) by U.S. EPA Method SW-846 6010B; and total cyanide by U.S. EPA Method 335.3. Additionally, air samples were analyzed for VOCs by Pace of Minneapolis, Minnesota by U.S. EPA Method TO-14.

Laboratory analytical results were evaluated in accordance with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (June 2008), U.S. EPA CLP NFG for Inorganic Data Review (October 2004), and the analytical methods. The analytical data were reviewed and qualified based on the results of the data evaluation parameters and/or the QC sample results provided by the laboratory. The complete data validation report is included as *Appendix B*. The analytical data for those compounds that did not meet the QC criteria were flagged by a “J” (estimated) or “U” (non-detect). Based on the results of this data validation, the data are considered usable as qualified.

2.4 FIELD WORK SUMMARY

The major field activities conducted at the WRR Site during the reporting period are summarized in *Appendix C*. Activities during this reporting period included various equipment repairs, calibration, and maintenance tasks.

3.0 SOIL VAPOR EXTRACTION SYSTEM

3.1 SYSTEM DESCRIPTION

The SVE system was constructed to remove VOCs from the vadose (unsaturated) zone. The horizontal configuration of the SVE well system is presented on *Figure 2*. The system consists of 41 SVE wells in the SE Area and 18 SVE wells in the AST Area. Operation of the SVE wells in the SE Area was reduced in November 2006 and suspended in April 2007. SVE wells in the AST Area are connected via underground piping to one of two branch lines (Branches G and H; *Figure 2*) that convey extracted vapors to the treatment building. Operation of branch line H was suspended in October 2002. Only branch line G is presently operated.

3.2 MONITORING RESULTS

Results of the SVE system monitoring conducted during this reporting period indicate:

- During the period of July 1 through December 31, 2010, the SVE system was operational for approximately 96.5 percent of the time (i.e., percent of total hours available). Downtime events were related to standard, regularly scheduled OM&M activities, maintenance and repairs, and a temporary shutdown at the request of the POTW.
- Air flow rates were collected each month from July through December 2010. The flow rate in Branch Line G averaged approximately 1,153 scfm while operating. Flow rate measurements collected during this reporting period are summarized in *Table 1*.
- Laboratory analytical data from the Summa canister sample collected in October 2010 are summarized in *Table 2*; historical data from Summa canister samples are summarized in *Appendix D, Table D-1*.

3.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

Based on laboratory analytical results from SVE system effluent air samples collected during the reporting period, an estimated 12,105 pounds of VOCs have been removed via the SVE system from vadose zone soils to date, with 12.9 pounds removed from July through December 2010. The main VOC constituents removed in the AST Area are TCE and cis-1,2-DCE. For this reporting period, the removal rate for the SVE system was approximately 0.07 pounds of total VOCs per day. The trend in VOC concentrations for the combined effluent air of the SVE, air sparge, and groundwater treatment systems from 1995 through the present is relatively stable, as shown in *Figure 4*.

Semi-annual groundwater monitoring is conducted in April and October of each year. During October 2010, samples were collected from 13 WRR Site monitoring wells and analyzed for VOCs and metals. Groundwater monitoring results for samples collected in October 2010 are presented in *Table 3*; historical groundwater monitoring data are presented in *Appendix D, Table D-2*. Groundwater monitoring data are discussed in Section 4.3. As discussed in Section 4.3 constituents in groundwater are still present at concentrations greater than site-specific PRGs, and the SVE system typically removes VOCs at less than 0.5 percent of the initial removal rates. This trend has been stable for approximately 14 years (*Figure 4*).

4.0 GROUNDWATER EXTRACTION SYSTEM

4.1 SYSTEM DESCRIPTION

The groundwater extraction system was constructed to capture and control groundwater impacted with VOCs. The groundwater extraction system consists of ten groundwater recovery wells installed in three areas of the WRR Site as follows: three recovery wells in the AST Area (RW-1 through RW-3), one recovery well in the monitoring well MW-7S area (RW-4), and six recovery wells in the SE Area (RW-5 through RW-10) (*Figure 1*). The extraction system also uses a soil-bentonite cut-off wall (i.e., a slurry wall), constructed to reduce the pumping rate necessary to control groundwater flow in the SE Area. The slurry wall encircles the SE Area near the Blue River. Extracted groundwater is pumped to the on-site treatment building through underground HDPE piping.

4.2 MONITORING RESULTS

Results of the groundwater extraction system monitoring conducted during this reporting period indicate:

- During the period of July through December 2010, the groundwater extraction system was operational for approximately 96.5 percent of the time (i.e., percent of total hours available). Primary downtime events were related to routine cleaning of recovery pumps, routine and annual plant maintenance, cleaning and repair of the pumps, meters, and controls, and a temporary shutdown due to inclement weather.
- A summary of system flow rates during this reporting period is included in *Table 4*. The average sustained groundwater recovery rate during the reporting period was approximately 60 gpm. During this reporting period, a total of 15,257,456 gallons of groundwater were recovered and treated. The largest total monthly flow was reported at 2,848,752 gallons for the month of July. The highest average daily

recovery rate during the reporting period was 91,900 gallons per day (gpd), which was reported during July. **Figure 5** is a summary of the cumulative and average daily groundwater recovery rates from October 1995 through December 2010. As of December 31, 2010, a cumulative total of 418,659,963 gallons of groundwater had been recovered, treated, and discharged to the Columbia City POTW.

- On-going, routine operation and maintenance activities are focusing on recovery well pump cleaning and/or repair, and recovery pipe cleaning as necessary to optimize groundwater extraction system performance.
- Water level elevation data collected during the reporting period are used to evaluate the groundwater table drawdown. These data are provided in **Table 5**. Groundwater contour maps for July through December 2010 are presented as **Figures 7-1** through **7-4**, **7-6**, and **7-7**. Because groundwater elevations were measured in all wells in October, **Figure 7-4** illustrates a representation of the groundwater elevations observed across the entire WRR Site. The influence of the recovery wells in the southeast corner is apparent, and the general groundwater flow direction across the property is southeast. The October 2010 groundwater elevations of the landfill wells in the B&N report (see **Table 2** of the B&N report, included as **Appendix A**) were consistent with the elevations observed on the WRR Site.
- **Figure 7-5** summarizes recent groundwater sampling analytical results from monitoring wells for October 2010.
- Columbia City municipal drinking water wells located to the north of the WRR Site are sampled annually in October. Recent and historical laboratory analytical results from these wells are presented in **Appendix D**, **Tables D-3** and **D-4**. Constituents associated with the

WRR Site have never been detected in the samples from the municipal wells.

- Groundwater from the recovery wells is sampled and analyzed for VOCs on an annual basis. The most recent sample results for these recovery wells (October 2010) are provided in **Table 6**; historical data from the recovery well samples are provided in **Appendix D, Table D-5**.

4.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary remedial objective of the groundwater extraction system is to remove dissolved-phase constituents from the upper aquifer on site, thereby restricting the potential off-site migration of dissolved-phase constituents to the Blue River or Columbia City municipal well field. Mass removal rates from the groundwater extraction system ranged from approximately 1.02 to 1.67 pounds of total VOCs removed per day during this reporting period.

Groundwater elevation data indicate that the slurry wall/groundwater extraction system is effectively maintaining an inward horizontal gradient in the SE Area. Monthly water elevations collected during the reporting period indicate the hydraulic head levels were lower inside the slurry wall when compared to the head levels outside the wall. For example, during the October 2010 event, the elevation within the confines of the slurry wall were 3.4 feet lower than water elevation immediately outside the slurry wall (based on monitoring wells MW-11S and MW-13S, **Table 5**).

OM&M activities, including on-going recovery pump cleaning, are conducted to increase groundwater system recovery rates to maintain an upward gradient in the SE Area. Based on the historical observations of groundwater extraction system performance, maintenance of the groundwater extraction system is conducted frequently (i.e., approximately once per quarter) in order to maintain hydraulic control. Review of the groundwater elevation data indicates that an upward gradient was maintained in the SE

Area during this reporting period (based on elevation data from MW-83AD and MW-83AS), with the exception of one month. The gradient during August 2010 was 0.007 downward. The average gradient for the other months during this reporting period was 0.07 upward.

The monitoring wells currently included in the semi-annual or annual sampling program, per the requirements of the *Final OM&M Plan*, are MW-1D, MW-4S, MW-7S, MW-9S, MW-11S, MW-14S, MW-15S, MW-16S, MW-83AS, MW-83AD, and MW-83B. Monitoring wells MW-13S and MW-83DS were added to the annual OM&M monitoring program per the July 11, 2002, Site Progress Meeting. During this reporting period, groundwater samples were collected from the following monitoring wells in accordance with the *Sampling and Analysis Plan for Environmental Monitoring - Revision 1* (July 1999): MW-1D, MW-4S, MW-7S, MW-9S, MW-11S, MW-13S, MW-14S, MW-15S, MW-16S, MW-83AD, MW-83DS, MW-83B, and MW-83AS.

A summary of monitoring well VOC and metals analytical data collected during this reporting period is included in **Table 3**; historical data are provided in **Appendix D, Table D-2**. Recent monitoring well VOC analytical results from October 2010 are also included in **Figure 7-5**. The most recent recovery well VOCs analytical data (October 2010) are included in **Table 6**; historical data are provided in **Appendix D, Table D-5**. Copies of laboratory analytical reports are available upon request. The sample results for each area are summarized below:

SE Area

- MW-1D – VOCs were not detected in the sample collected from MW-1D. VOCs have historically not been detected in the samples collected from this well.
- MW-11S – The concentrations of 1,1-dichloroethene (1,1-DCE, 4.5 µg/L), cis-1,2-DCE (410 µg/L), and VC (192 µg/L) exceeded PRGs (0.0167 µg/L, 70 µg/L, and 0.0283 µg/L, respectively). The 1,1-DCE

and cis-1,2-DCE concentrations are consistent with the historical sample results. The VC result is higher than the historical results.

- MW-13S – The concentrations of TCE (67 µg/L), and VC (20 µg/L) exceeded PRGs (2.54 µg/L and 0.0283 µg/L, respectively). Cis-1,2-DCE (28 µg/L) was also detected during this sampling event but at a concentration less than the PRG (70 µg/L). The VOC results obtained during this event for TCE and cis-1,2-DCE are generally less than the historical VOC concentrations. The recent concentrations of VC appear higher than the historical sample results.
- MW-83AS – cis-1,2-DCE (364 µg/L) and VC (333 µg/L) concentrations exceeded PRGs (70 µg/L and 0.0283 µg/L, respectively). The cis-1,2-DCE concentration was consistent with historical samples. The VC sample result was generally less than historical sample results but consistent with the results obtained since April 2009.
- MW-83AD – cis-1,2-DCE (24 µg/L) and VC (18 µg/L) were detected during this sampling event. The VC concentration exceeded the PRG (0.0283 µg/L). The VOC results obtained during this event were consistent with the results from the last three events.
- MW-83B – cis-1,2-DCE (3.8 µg/L) was detected during this sampling event. The cis-1,2-DCE concentration was less than the PRG (70 µg/L). VOCs have not been detected in the samples collected from this well since 1988.
- MW-83DS – cis-1,2-DCE (41 µg/L) and VC (30 µg/L) were detected during this sampling event. The VC concentration exceeded the PRG (0.0283 µg/L). The VOC concentrations obtained during this sampling event are generally consistent with the sample results obtained during previous events.

- RW-5 – cis-1,2-DCE (626 µg/L), TCE (11 µg/L), and VC (215 µg/L) were detected in this recovery well at concentrations that exceed PRGs (70 µg/L, 2.54 µg/L, and 0.0283 µg/L, respectively). The VOC results for this recovery well are generally less than the VOC concentrations obtained since 1997.

The following table summarizes the most recent VOC results that exceed PRGs for each well in the SE Area. The general trend in VOC concentrations for each well is also presented. These general trends are based on a qualitative assessment of the historical sample results (i.e., the trends are not based on quantitative statistical tests).

Well Name	VOCs that Exceed PRGs	General VOC Concentration Trend
MW-1D	None	Non-detect
MW-11S	1,1-DCE cis-1,2-DCE VC	None None Increasing
MW-13S	TCE VC	Decreasing Increasing
MW-83AS	cis-1,2-DCE VC	None
MW-83AD	VC	None
MW-83B	None	Non-detect
MW-83DS	VC	Decreasing
RW-5	cis-1,2-DCE TCE VC	Decreasing

AST Area

- MW-9S – The concentrations of cis-1,2-DCE (15,800 µg/L), trans-1,2-DCE (227 µg/L), TCE (1,020 µg/L), and VC (87 µg/L) exceeded PRGs (70 µg/L, 100 µg/L, 2.54 µg/L, and 0.0283 µg/L, respectively). The VOC concentrations obtained during this sampling event for MW-9S are consistent with the historical results for this well.

- MW-14S – Chloroethane (38 µg/L), 1,1-dichloroethane (1,1-DCA, 37 µg/L), cis-1,2-DCE (3 µg/L), and VC (5.9 µg/L) were detected in the sample collected from MW-14S. Only the concentration of VC exceeded the PRGs (0.0283 µg/L). The results obtained during this sampling event are generally higher than the historical results for this well.
- MW-15S – TCE (1.8 µg/L) was the only VOC detected in the sample collected from MW-15S. The TCE concentration was less than the PRG and historical TCE concentrations.
- MW-16S – 1,1-DCA (15 µg/L), cis-1,2-DCE (52 µg/L), 1,1,1-TCA (16 µg/L), and VC (4.2 µg/L) were detected in the sample collected from MW-16S during the October 2010 sampling event. Only the result for VC exceeded the PRG (0.0283 µg/L). The results obtained during this sampling event were generally less than the VOC concentrations obtained historical sampling events, but consistent with the results obtained during the last three years.
- RW-1 – Chloroethane (22 µg/L), 1,1-DCA (40 µg/L), cis-1,2-DCE (24 µg/L), 1,1,1-TCA (8.3 µg/L), TCE (2.4 µg/L), and VC (18 µg/L) were detected in the sample collected during this event. The results for VC exceeded the PRG (0.0283 µg/L). The VOC concentrations for this sampling event were generally consistent with the results obtained since 2005.
- RW-3 – cis-1,2-DCE (135 µg/L), trans-1,2-DCE (5.1 µg/L), 1,1,1-TCA (8.9 µg/L), TCE (78 µg/L), and VC (7.7 µg/L) were detected in the sample collected from RW-3 during this event. The result for cis-1,2-DCE, TCE, and VC exceeded the PRGs (70 µg/L, 2.54 µg/L, and 0.0283 µg/L, respectively). In general, the VOC concentrations for this sampling event were consistent with the concentrations obtained since 2003.

The following table summarizes the most recent VOC results that exceed PRGs for each well in the AST Area. The general trend in VOC concentrations for each well is also presented. These general trends are based on a qualitative assessment of the historical sample results (i.e., the trends are not based on quantitative statistical tests).

Well Name	VOCs that Exceed PRGs	General VOC Concentration Trend
MW-9S	cis-1,2-DCE trans-1,2-DCE TCE VC	None
MW-14S	VC	None
MW-15S	None	Decreasing
MW-16S	VC	None
RW-1	VC	None
RW-3	cis-1,2-DCE TCE VC	None

Recovery Well RW-4 Area:

- MW-4S – In October 2010, VOCs were not detected in MW-4S. These results are consistent with the results obtained during the previous sampling event. Historically, VC has been detected in this well at relatively low concentrations (e.g., less than 10 µg/L since 2005).
- MW-7S – The only VOCs detected during this sampling event were cis-1,2-DCE (427 µg/L) and trans-1,2-DCE (59 µg/L). The cis-1,2-DCE result was greater than the PRG (70 µg/L). The results for this event were generally higher than the previous VOC results.
- RW-4 – During the most recent sampling event, cis-1,2-DCE (137 µg/L), and trans-1,2-DCE (13 µg/L) were detected. The result for cis-1,2-DCE exceeded the PRG (70 µg/L). The October 2010 VOC concentrations for this well were generally less than the historical sample results.

The following table summarizes the most recent VOC results that exceed PRGs for each well in the RW-4 Area. The general trend in VOC concentrations for each well is also presented. These general trends are based on a qualitative assessment of the historical sample results (i.e., the trends are not based on quantitative statistical tests).

Well Name	VOCs that Exceed PRGs	General VOC Concentration Trend
MW-4S	None	None
MW-7S	cis-1,2-DCE	Increasing
RW-4	cis-1,2-DCE	Decreasing

5.0 GROUNDWATER PRE-TREATMENT SYSTEM

5.1 SYSTEM DESCRIPTION

The groundwater pre-treatment system is designed to remove VOCs from extracted groundwater, prior to discharge to the Columbia City POTW. Groundwater extracted from the WRR Site's ten groundwater recovery wells is initially pumped to an influent storage tank for solids settling and equalization. The equalized water is transferred through a bag filter to the top of an air stripping tower via electric transfer pumps. Water cascades downward through the tower packing, while air flows upward from near the tower base, inducing liquid-to-gas mass transfer of VOCs from the groundwater. The treated water drains from the tower into an effluent sump, which is pumped via a dedicated force main to the Columbia City POTW.

5.2 MONITORING RESULTS

During the period of July through December 2010, the groundwater pretreatment system was operational 96.5 percent of the time (i.e., percent of total hours of available). Primary downtime events were related to on-going routine cleaning activities and maintenance, non-routine maintenance and repairs.

Monthly groundwater treatment system sampling consists of influent and effluent sampling for VOCs; detailed VOC results for this monitoring period are provided in **Table 7** and historical results are summarized in **Figure 6**. The air stripping tower has consistently removed VOCs prior to discharge to the Columbia City POTW. As shown on **Figure 6**, total VOC concentrations in air stripping tower influent have fluctuated from as low as 273 µg/L to as high as 3,274 µg/L (in September 2003 and February 1996, respectively), since commencement of treatment system operations. Influent groundwater VOC concentrations can vary over time based on a variety of factors including recovery well cycling, rainfall events, and water levels. The influent groundwater total VOC concentrations during this reporting period began at 2,170 µg/L

in July 2010 and ended at 1,626 µg/L in December 2010 (shown in *Table 7*). The average total VOC concentration removed during the reporting period was approximately 1,882 µg/L. For this reporting period, the average groundwater constituent mass removal rate was 1.32 pounds of total VOCs per day, based on an average flow rate of 82,950 gpd and an average total VOC concentration removed of 1,882 µg/L.

Average groundwater constituent mass removal rates since the commencement of remediation system operations have ranged from approximately 0.13 to 13.2 pounds per day of total VOCs. Historical mass removal rates for specific VOCs from April 1998 through October 2010 are provided in *Appendix D, Table D-6*. The total mass removed during the period of July through December 2010 and attributable to the groundwater pre-treatment system is approximately 235 pounds; the total mass to date is an estimated 4,606 pounds.

Groundwater treatment system effluent samples are collected during the October sampling events and analyzed for non-VOC parameters. These historical results are provided in *Appendix D, Table D-7*.

5.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

Laboratory analytical results for the groundwater treatment system monthly effluent sampling for this monitoring period, conducted in accordance with the discharge agreement (i.e., the agreement in place prior to February 1, 1998) with the Columbia City POTW, are included in *Table 7*. Analytical results (from the current monitoring period and historically) have indicated that low levels of both VOCs and inorganic compounds are present in the treated groundwater discharged to the Columbia City POTW.

6.0 OFF-GAS TREATMENT SYSTEM

6.1 SYSTEM DESCRIPTION

The off-gas treatment system was operated until June 1999 to remove VOCs from the off-gases of the air stripping tower and the SVE system prior to discharge to the atmosphere. On June 24, 1999, air treatment was discontinued; however, monthly air sampling continues to be conducted on the effluent air stream as a means of monitoring potential risk levels associated with the untreated air stream.

Currently, upon entering the treatment building, the combined air stream of the air stripping tower and the SVE system is drawn through an air filter and moisture separator by two blowers connected in parallel. After exiting the blowers, the air stream passes through a heat exchanger prior to discharge to the atmosphere.

6.2 MONITORING RESULTS

The SVE system effluent (equivalent to the former air treatment system influent) samples are collected and analyzed for VOCs on a monthly basis. *Table 8* presents the monthly effluent sample results collected during this reporting period; historical results are provided in *Appendix D, Table D-8*.

Monitoring conducted to date, including the monthly SVE system effluent sampling (which includes air stripping system off-gases), indicates the following:

- Calculations were conducted using the VOC concentrations of off-gas vapor concentrations to assess hypothetical risk levels; a more detailed discussion of the risk calculations is provided in Section 6.3. Results of the effluent sample analyses indicate hypothetical risk levels did not exceed the cumulative risk action level of 1×10^{-6} (representing an increased cancer risk of one in one million exposed). The results for

this reporting period are presented in **Table 9**. Current and historical air risk calculations are provided in **Appendix D, Table D-9**.

6.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary objective of the on-going off-gas air monitoring is to ensure that the cumulative life-time cancer risk at the WRR Site boundary remains less than the cumulative risk action level of 1×10^{-6} . To verify compliance with this objective, air dispersion calculations were completed to estimate the maximum concentrations at receptor locations outside the site boundary. The Industrial Source Complex - Long-Term (ISC-LT) model was used for the purpose of modeling the dispersion of the effluent from the soil remediation system (**Appendix E**). The maximum concentrations determined by the air modeling study were multiplied by unit risk factors to estimate the excess carcinogenic risk posed by the hypothetical emissions through the inhalation route. The unit risk factors used in this study were developed from toxicity values included in U.S. EPA's *Integrated Risk Information System*, U.S. EPA's *Health Assessment Summary Tables* (Annual FY-1995), and information provided by the U.S. EPA Environmental Criteria Assessment Office. The unit risk factors conservatively assume a chronic exposure to the chemicals for 24 hours a day, 365 days a year, for a 70-year lifetime. In this Progress Report, references to cancer risk and cancer risk estimates refer to the estimated potential risks as indicated by the use of ISC-LT air dispersion modeling and are not meant to represent or suggest actual risks.

Air dispersion calculations using the off-gas air data indicate that the 1×10^{-6} action level was not exceeded during this reporting period. Though active air treatment was discontinued on June 24, 1999, monthly effluent air sampling and risk calculations will continue. Air treatment will be reactivated should the results from two consecutive monthly air samples indicate cumulative risks in excess of 1×10^{-6} .

7.0 INSTITUTIONAL CONTROLS

The following institutional controls (ICs) were specified in the RD/RA Consent Decree (CD) to supplement the remedial actions.

1. There shall be no interference of any sort, by any person, with construction, operation, maintenance, monitoring, and efficacy of all components and structures and improvements resulting from or relating to the response actions implemented pursuant to the RD/RA CD.
2. There shall be no operations on the facility which extract, consume, or otherwise use the groundwater underlying the facility property or adjoining property except as provided for in the course of carrying out the terms of the RD/RA CD without prior written U.S. EPA approval and notification to IDEM.
3. There shall be no agricultural, recreational, residential, commercial, or industrial use of the facility, including but not limited to any excavation, grading or other activity involving movement of soils at the facility, and any construction or placement of any residence, buildings, or structures - fixtures or otherwise - other than for the purpose of implementing, monitoring, and maintaining the response action required by the RD/RA CD without prior written U.S. EPA approval and notification to IDEM.
4. There shall be no construction, installation, or use of any buildings, wells, pipes, roads, ditches or any other structures - fixtures or otherwise - on the facility property that may interfere with the construction, physical integrity, operation and maintenance, or efficacy of the work undertaken pursuant to the RD/RA CD, including without limitation the facility's: security fence; municipal landfill cap; soil cover(s) related to PAH impacted soil; groundwater extraction,

treatment, and discharge system; soil vapor extraction system; air, groundwater and surface water monitoring systems; and soil immobilization or washing systems and locations, unless such construction, installation or use is approved in advance, in writing, by U.S. EPA and IDEM has been notified.

During this reporting period, onsite personnel have not observed or performed activities that would be considered inconsistent with these ICs.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Overall remediation system mass removal calculations indicate that, since inception of treatment system operations, approximately 16,711 pounds of total VOCs have been removed by the SVE and groundwater treatment systems (see *Figure 8*). Of this, approximately 72 percent (or 12,105 pounds) is attributed to operation of the SVE and air sparging system, and approximately 28 percent (or 4,606 pounds) is attributed to the groundwater extraction system. Currently, most of the mass removal is being accomplished via the groundwater extraction system.

As shown on *Figure 9* (which illustrates VOC removal rates in pounds per day since 1995), initial constituent mass removal rates from the entire remediation system were approximately 88 pounds of total VOCs per day during the startup phase of system operations. This removal rate has decreased to approximately 1.37 pounds of total VOCs per day, as of this reporting period.

Current operation, maintenance and monitoring activities will continue during the next reporting period. No recommendations for changes or enhancements to the system are being made at this time.

TABLES

Table 1
Summary of Soil Vapor Extraction Air Flow Rates from the SE and AST Areas
July through December 2010
Wayne Reclamation & Recycling

DATE TESTED	AIR FLOW (scfm)	
	SOUTHEAST AREA	AST AREA
7/13/10	0	1050
8/9/10	0	1000
9/15/10	0	1200
10/22/10	0	1240
11/12/10	0	1230
12/17/10	0	1200
AVERAGE FLOW:	0	1153
MAXIMUM FLOW:	0	1240
MINIMUM FLOW:	0	1000

Notes:

Average Flow is based on operating flow rates while the air stripper is operating.

AST = Aboveground Storage Tank.

Flow measurement reported in standard cubic feet per minute (scfm).

All flow measurements are approximate.

Vacuum and flow measurements at the individual soil vapor extraction wells were suspended as of October 2002.

The operation of Branch Line H in the AST Area was suspended in October 2002.

The operation of SVE wells in the Southeast Area was decreased in November 2006 and suspended in April 2007.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
October 2010
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	AST Area
	Branch G (East Branch)
	10/27/10
1,1-Dichloroethane	<12.5
cis-1,2-Dichloroethene	47
trans-1,2-Dichloroethene	<12.5
Methylene chloride	<12.5
Tetrachloroethene	<12.5
1,1,1-Trichloroethane	<12.5
Trichloroethene	98
1,2,4-Trimethylbenzene	<12.5
1,3,5-Trimethylbenzene	<12.5
Vinyl Chloride	<12.5
Xylenes, Total	<32.5
Soil Vapor Extraction Wells:	41 - 43, 50, and 53 - 58

Notes: < = Not detected greater than the reporting limit provided.

NA = Not analyzed

AST = Above ground storage tank

ppb[v/v] = parts per billion (volume)

Table 3
Monitoring Well Analytical Results
October 2010
Wayne Reclamation & Recycling

CONSTITUENT	MW-1D (Southeast Area)	MW-4S (RW-4 Area)	MW-7S (RW-4 Area)	MW-9S (AST Area)	MW-11S (Southeast Area)	MW-13S (Southeast Area)	MW-14S (AST Area)	MW-15S (AST Area)	MW-16S (AST Area)	MW-83AD (Southeast Area)	MW-83DS (Southeast Area)	MW-83B (Southeast Area)	MW-83AS (Southeast Area)	PRG (µg/L)
	10/23/10	10/20/10	10/20/10	10/20/10	10/20/10	10/23/10	10/20/10	10/21/10	10/20/10	10/20/10	10/23/10	10/20/10	10/20/10	
VOCs (µg/L)														
Acetone	< 20	< 20	< 20	< 200	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	3,650
Benzene	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.617
Bromomethane	< 2	< 2	< 2	< 20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	< 20	< 20	< 20	< 200	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	< 20	< 20	< 20	< 200	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	768
Chloroethane	< 2	< 2	< 2	< 20	< 2	< 2	< 2	38	< 2	< 2	< 2	< 2	< 2	--
Chloroform	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.274
Dibromomethane	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	< 1	< 1	< 1	< 10	< 1	< 1	37	< 1	15	< 1	< 1	< 1	< 1	14
1,2-Dichloroethane	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	973
1,1-Dichloroethene	< 1	< 1	< 1	< 10	4.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.0167
cis-1,2-Dichloroethene	< 1	< 1	427	15,800	410	28	3	< 1	52	24	41	3.8	364	70
trans-1,2-Dichloroethene	< 1	< 1	59	227	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	100
1,2-Dichloroethene, Total	< 1	< 1	486	16,027	410	28	3	< 1	52	24	41	< 1	364	(170)
1,2-Dichloropropane	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.25
Ethylbenzene	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)	< 20	< 20	< 20	< 200	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	487
Tetrachloroethene	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.43
Toluene	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	< 10	< 1	< 1	< 1.0	16	< 1	< 1	< 1	< 1	200
1,1,2-Trichloroethane	< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.314
Trichloroethene	< 1	< 1	< 1	1,020	< 1	67 J	< 1	1.8	< 1	< 1	< 1	< 1	< 1	2.54
1,2,4-Trimethylbenzene	< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	< 1.0	< 1.0	< 1.0	87	192	20	5.9	< 1.0	4.2	18	30	< 1.0	333	0.0283
Xylenes, Total	< 2	< 2	< 2	< 10	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	828
TOTAL VOCs	0	0	486	17,139	607	115	84	1.8	87	42	71	0	711	--
Metals (mg/L)														
Arsenic, Dissolved	<0.10	< 0.1	< 0.1	< 0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.1	--
Barium, Dissolved	0.14	0.18	0.06	0.065	0.057	0.16	0.067	0.059	0.036	0.11	0.13	0.15	0.078	--
Cadmium, Dissolved	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

< = Not detected greater than the reporting limit provided.

-- = No PRG assigned

(170) = The PRG for 1,2-Dichloroethene, Total is the sum of the PRGs for cis-1,2-Dichloroethene and trans-1,2-Dichloroethene.

AST = Above ground storage tank

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

Shaded = Analyte detected greater than the corresponding PRG.

Table 4
Groundwater Treatment System Flow Summary
Wayne Reclamation & Recycling

July 2010		August 2010		September 2010		October 2010		November 2010		December 2010	
DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)
1	106,416	1	96,768	1	94,032	1	84,960	1	75,312	1	67,599
2	106,416	2	96,768	2	54,526	2	84,960	2	75,312	2	74,592
3	106,416	3	96,768	3	54,983	3	84,960	3	75,312	3	74,592
4	106,416	4	85,653	4	94,032	4	84,960	4	86,255	4	74,592
5	99,792	5	88,416	5	94,032	5	84,960	5	87,408	5	74,592
6	99,792	6	88,416	6	88,992	6	84,960	6	87,408	6	74,592
7	99,792	7	88,416	7	88,992	7	84,960	7	87,408	7	74,592
8	99,792	8	88,416	8	88,992	8	85,862	8	87,408	8	78,624
9	99,792	9	89,136	9	88,992	9	89,856	9	87,408	9	78,624
10	99,792	10	89,136	10	88,992	10	89,856	10	87,408	10	78,624
11	99,792	11	89,136	11	88,992	11	89,856	11	87,408	11	78,624
12	99,792	12	89,136	12	88,992	12	88,421	12	94,752	12	78,624
13	99,792	13	89,136	13	88,992	13	89,856	13	94,752	13	78,624
14	84,816	14	89,136	14	88,992	14	89,856	14	94,752	14	78,624
15	84,816	15	89,136	15	88,992	15	89,856	15	94,752	15	78,624
16	84,816	16	67,311	16	84,528	16	87,120	16	94,752	16	78,624
17	84,816	17	69,984	17	84,528	17	87,120	17	94,752	17	81,936
18	84,816	18	69,984	18	84,528	18	87,120	18	89,562	18	81,936
19	84,816	19	69,984	19	84,528	19	87,120	19	95,040	19	81,936
20	84,816	20	69,984	20	84,528	20	87,120	20	95,040	20	81,936
21	73,728	21	69,984	21	84,528	21	87,120	21	95,040	21	81,936
22	73,728	22	16,573	22	84,528	22	87,120	22	95,040	22	81,936
23	73,728	23	20,801	23	79,488	23	81,504	23	95,040	23	81,936
24	73,728	24	76,684	24	79,488	24	81,504	24	95,040	24	68,112
25	73,728	25	67,662	25	79,488	25	81,504	25	95,040	25	68,112
26	73,728	26	58,569	26	79,488	26	81,504	26	85,248	26	68,112
27	97,776	27	54,702	27	79,488	27	81,504	27	85,248	27	68,112
28	97,776	28	2,148	28	79,488	28	75,312	28	85,248	28	68,112
29	97,776	29	0	29	79,488	29	75,312	29	85,248	29	68,112
30	97,776	30	59571.2	30	79,488	30	75,312	30	85,248	30	68,112
31	97,776	31	103104			31	75,312			31	95,472
Total Monthly Flow (gallons)	2,848,752		2,230,617		2,509,124		2,626,747		2,673,641		2,368,575
Average Daily Flow (gallons)	91,900		72,000		83,600		84,700		89,100		76,400
Total Plant Run Time (minutes)	44,640		36,809		41,997		44,553		43,098		44,505
Av. Flow During Actual Plant Run Time (gpm)	64		61		60		59		62		53

Notes:

gpd = Gallons per day.

Av. = Average.

gpm = Gallons per minute.

Av. Flow is calculated by dividing the total monthly flow by the total number of operational days for the given month.

Period	Total Gallons Treated
6 Months	15,257,456
12 Months	30,716,442
Since 1995	418,659,963

Table 5
Summary of Groundwater Elevations
Wayne Reclamation & Recycling

Well Identification	Date:	07/13/2010	08/09/2010	09/15/2010	10/18/2010	11/12/2010	12/17/2010
	TOIC Elevation 2001 - 2003	Groundwater Elevation (feet above mean sea level)					
		--	--	--	809.49	--	--
MW-1D	826.08	--	--	--	809.49	--	--
MW-2S	825.34	808.68	809.17	808.59	807.35	807.02	807.35
MW-3S	824.06	808.47	809.25	808.73	807.28	806.96	807.26
MW-4S	843.06	--	--	--	810.21	--	--
MW-5S	833.02	--	--	--	811.29	--	--
MW-7S	836.12	--	--	--	810.22	--	--
MW-8S	835.52	--	--	--	810.42	--	--
MW-8D	834.11	--	--	--	809.89	--	--
MW-9S	825.44	--	--	--	810.21	--	--
MW-10S	823.15	808.53	809.15	808.58	807.21	806.93	807.23
MW-11S	825.08	808.57	809.15	808.81	807.57	807.31	807.53
MW-13S	826.40	811.41	811.11	810.97	810.93	810.86	810.84
MW-13D	826.44	--	--	--	809.35	--	--
MW-14S	821.30	--	--	--	810.22	--	--
MW-15S	827.64	--	--	--	810.46	--	--
MW-16S	827.41	--	--	--	810.31	--	--
MW-17S	826.56	--	--	--	810.77	--	--
MW-18S	824.16	--	--	--	810.38	--	--
MW-19S	832.07	--	--	--	810.64	--	--
P-1	834.28	--	--	--	810.32	--	--
P-2	825.49	--	--	--	810.34	--	--
P-3	823.48	--	--	--	810.36	--	--
P-4	822.67	--	--	--	810.29	--	--
MW-83AD	826.15	809.06	808.95	808.61	808.96	809.24	809.04
MW-83AS	826.13	808.59	809.09	808.53	807.29	806.95	807.28
MW-83B	840.55	--	--	--	810.00	--	--
MW-83DD	825.30	--	--	--	810.13	--	--
MW-83DS	825.21	810.86	810.39	810.40	810.07	810.23	810.02
GM-3	822.87	--	--	--	810.33	--	--
GM-4	827.40	--	--	--	810.01	--	--
PZ-1	823.66	--	--	--	--	--	--
PZ-2	825.73	--	--	--	--	--	--
PZ-3	826.46	--	--	--	--	--	--
PZ-4	825.52	--	--	--	--	--	--
G-1	808.82	--	--	--	--	--	--
G-2	810.10	--	--	--	--	--	--
G-3	809.91	--	--	--	--	--	--
G-4	810.21	--	--	--	--	--	--
RW-1	818.45	--	--	--	--	--	--
RW-2	824.29	--	--	--	--	--	--
RW-3	822.71	--	--	--	--	--	--
RW-4	833.24	--	--	--	--	--	--
RW-5	823.94	--	--	--	--	--	--
RW-6	820.71	--	--	--	--	--	--
RW-7	820.21	--	--	--	--	--	--
RW-8	821.86	--	--	--	--	--	--
RW-9	821.69	--	--	--	--	--	--
RW-10	822.55	--	--	--	--	--	--

Notes:

TOIC = Top of inner well casing; MW = monitoring well; P and PZ = piezometer; GM = landfill well; G = river gauge point; RW = recovery well.

TOIC and surface elevations based on Benchmark Surveying, Inc. surveys of 7/2/2001, 10/25/2001, and 5/1/2003, except where noted.

⁽¹⁾ TOIC elevations based on InSite, Inc. survey of 7/2/2002, following repair of those wells.

Table 6
Recovery Well Analytical Results
October 2010
Wayne Reclamation & Recycling

CONSTITUENT	RW-1	RW-3	RW-4	RW-5	PRG ($\mu\text{g/L}$)
	10/22/2010	10/22/2010	10/22/2010	10/22/2010	
VOCs ($\mu\text{g/L}$)					
Acetone	< 20	< 20	< 20	< 20	3,650
Benzene	< 1	< 1	< 1	< 1	0.617
Bromomethane	< 2	< 2	< 2	< 1	--
2-Butanone (MEK)	< 20	< 20	< 20	< 20	--
n-Butylbenzene	< 1	< 1	< 1	< 1	--
Carbon Disulfide	< 20	< 20	< 20	< 20	768
Chloroethane	22	< 2	< 2	< 2	--
Chloroform	< 1	< 1	< 1	< 1	0.274
Dibromomethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	40	< 1	< 1	< 1	973
1,2-Dichloroethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	< 1	< 1	< 1	< 1	0.0167
cis-1,2-Dichloroethene	24	135	137	626	70
trans-1,2-Dichloroethene	< 1	5.1	13	5.8	100
1,2-Dichloroethene, Total	24	140	150	632	(170)
1,2-Dichloropropane	< 1	< 1	< 1	< 1	1.25
Ethylbenzene	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)	< 20	< 20	< 20	< 20	487
Tetrachloroethene	< 1	< 1	< 1	< 1	1.43
Toluene	< 1	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane	8.3	8.9	< 1	< 1	200
1,1,2-Trichloroethane	< 1	< 1	< 1	< 1	0.314
Trichloroethene	2.4	78	< 1	11	2.54
1,2,4-Trimethylbenzene	< 5	< 5	< 5	< 5	--
Vinyl Chloride	18	7.7	< 1	215	0.0283
Xylenes, Total	< 2	< 2	< 2	< 2	828
TOTAL VOCs	115	235	150	858	--

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

-- = No PRG assigned.

< = Not detected above the reporting limit provided

(170) = The PRG for 1,2-Dichloroethene, Total is the sum of the PRGs for cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

Bold = Analyte detected above laboratory reporting limit

Italics = Reporting limit above the corresponding PRG

Shaded = Analyte detected above the corresponding PRG.

Table 7
Summary of Groundwater Treatment System Volatile Organic Compound
Influent and Effluent Sampling
Wayne Reclamation & Recycling

CONSTITUENT	7/16/2010		8/11/2010		9/15/2010	
	IN	EFF	IN	EFF	IN	EFF
VOCs (µg/L)						
1,1-Dichloroethane	16	<1.0	15	<1.0	17	<1.0
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	5	<1.0	<1.0	<1.0	4	<1.0
cis-1,2-Dichloroethene	1,370	18	1,380	32	1,490	15
trans-1,2-Dichloroethene	23	<1.0	19	<1.0	21	<1.0
Trichloroethene	517	3	553	7	481	2
Vinyl Chloride	239	<1.0	192	<1.0	222	<1.0
Total VOC Concentration	2,170	21	2,159	38	2,235	17

CONSTITUENT	10/21/2010		11/12/2010		12/17/2010	
	IN	EFF	IN	EFF	IN	EFF
VOCs (µg/L)						
1,1-Dichloroethane	13	<1.0	14	<1.0	18	<1.0
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0	6	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	1,330	18	924	17	1,150	23
trans-1,2-Dichloroethene	18	<1.0	16	<1.0	15	<1.0
Trichloroethene	307	2	281	2	310	3
Vinyl Chloride	208	<1.0	127	<1.0	133	<1.0
Total VOC Concentration	1,876	20	1,368	18	1,626	26

Notes:

Volatile organic compounds (VOCs) reported in micrograms per liter (µg/L).

IN = Influent water sample.

< = Not detected above the reporting limit provided.

EFF = Effluent water sample.

Bold = Analyte detected above the laboratory reporting limit.

Results indicated for primary detected constituents.

Table 8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	7/13/2010	8/09/2010	9/15/2010	10/22/2010	11/12/2010	12/17/2010
	EFFLUENT SAMPLE					
1,1-Dichloroethane	<114	20	8.5	<44.2	18	17
1,1-Dichloroethene	<114	<14.3	1.5	<44.2	<13.8	3.1
cis-1,2-Dichloroethene	2,640	1,180	1,820	907	2,080	1,960
trans-1,2-Dichloroethene	<114	27	10	<44.2	17	17
Tetrachloroethene	<114	<14.3	5.8	<44.2	<13.8	6.2
Toluene	<114	<14.3	1.2	<44.2	<13.8	<0.72
1,1,1-Trichloroethane	<114	<14.3	1.4	<44.2	<13.8	3.5
Trichloroethene	785	537	607	158	343	603
Vinyl Chloride	453	370	284	149	240	349
Cumulative Risk⁽¹⁾	1.64E-07	1.16E-07	9.86E-08	4.97E-08	7.57E-08	1.13E-07

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 9.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table 9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	114	785	114	2640	114	453	114	114	114	
7/13/2010	(g/s)	0.0006	0.0044	0.0006	0.0148	0.0006	0.0025	0.0006	0.0006	0.0006	
	Max.Conc.	0.003	0.021	0.003	0.069	0.003	0.012	0.003	0.003	0.003	
	ECR	1.77E-08	4.13E-08				1.05E-07		4.89E-11		1.64E-07
EFF	(ppb[v/v])	14	537	14	1180	27	370	14	20	14	
8/09/2010	(g/s)	0.0001	0.0030	0.0001	0.0066	0.0002	0.0021	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.014	0.000	0.031	0.001	0.010	0.000	0.001	0.000	
	ECR	2.22E-09	2.82E-08				8.56E-08		8.57E-12		1.16E-07
EFF	(ppb[v/v])	6	607	2	1820	10	284	1	9	1	
9/15/2010	(g/s)	0.0000	0.0034	0.0000	0.0102	0.0001	0.0016	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.016	0.000	0.048	0.000	0.007	0.000	0.000	0.000	
	ECR	9.00E-10	3.19E-08				6.57E-08		3.64E-12		9.86E-08
EFF	(ppb[v/v])	44	158	44	907	44	149	44	44	44	
10/22/2010	(g/s)	0.0002	0.0009	0.0002	0.0051	0.0002	0.0008	0.0002	0.0002	0.0002	
	Max.Conc.	0.001	0.004	0.001	0.024	0.001	0.004	0.001	0.001	0.001	
	ECR	6.86E-09	8.31E-09				3.45E-08		1.89E-11		4.97E-08
EFF	(ppb[v/v])	14	343	14	2080	17	240	14	18	14	
11/12/2010	(g/s)	0.0001	0.0019	0.0001	0.0116	0.0001	0.0013	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.009	0.000	0.055	0.000	0.006	0.000	0.000	0.000	
	ECR	2.14E-09	1.80E-08				5.55E-08		7.72E-12		7.57E-08
EFF	(ppb[v/v])	6	603	3	1960	17	349	4	17	1	
12/17/2010	(g/s)	0.0000	0.0034	0.0000	0.0110	0.0001	0.0020	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.016	0.000	0.052	0.000	0.009	0.000	0.000	0.000	
	ECR	9.62E-10	3.17E-08				8.08E-08		7.29E-12		1.13E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]).

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

PCE - Tetrachloroethene

TCE - Trichloroethene

1,1-DCE - 1,1-Dichloroethene

cis-1,2-DCE - cis-1,2-Dichloroethene

trans-1,2-DCE - trans-1,2-Dichloroethene

VC - Vinyl chloride

1,1,1-TCA - 1,1,1-Trichloroethane

1,1-DCA - 1,1-Dichloroethane

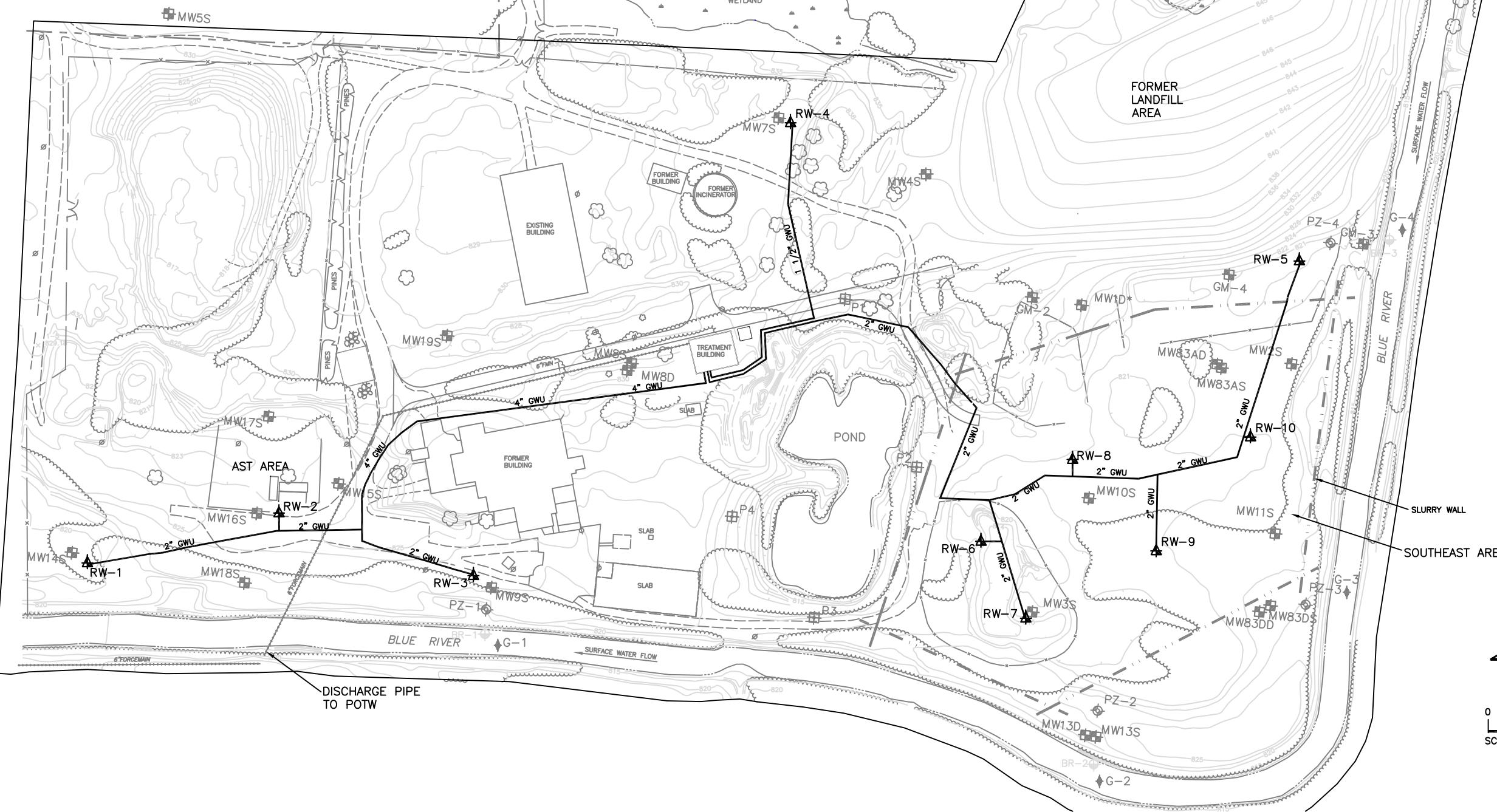
FIGURES

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN. DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY ATYES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. RECORD OF CONSTRUCTION PIPING LAYOUT IS BASED ON FIELD MEASUREMENTS AND OBSERVATIONS. PIPING LAYOUT WAS NOT SURVEYED.

LEGEND

- ▲ RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- ◆ PIEZOMETER LOCATION
- ◆ RIVER GAUGE POINT LOCATION
- ◆ RIVER WATER SAMPLING LOCATION
- SYSTEM PIPING



SITE PLAN - GROUNDWATER EXTRACTION & TREATMENT SYSTEM
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Sheet Number
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Drawing Number
1008811
010101 D1



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FIGURE 1

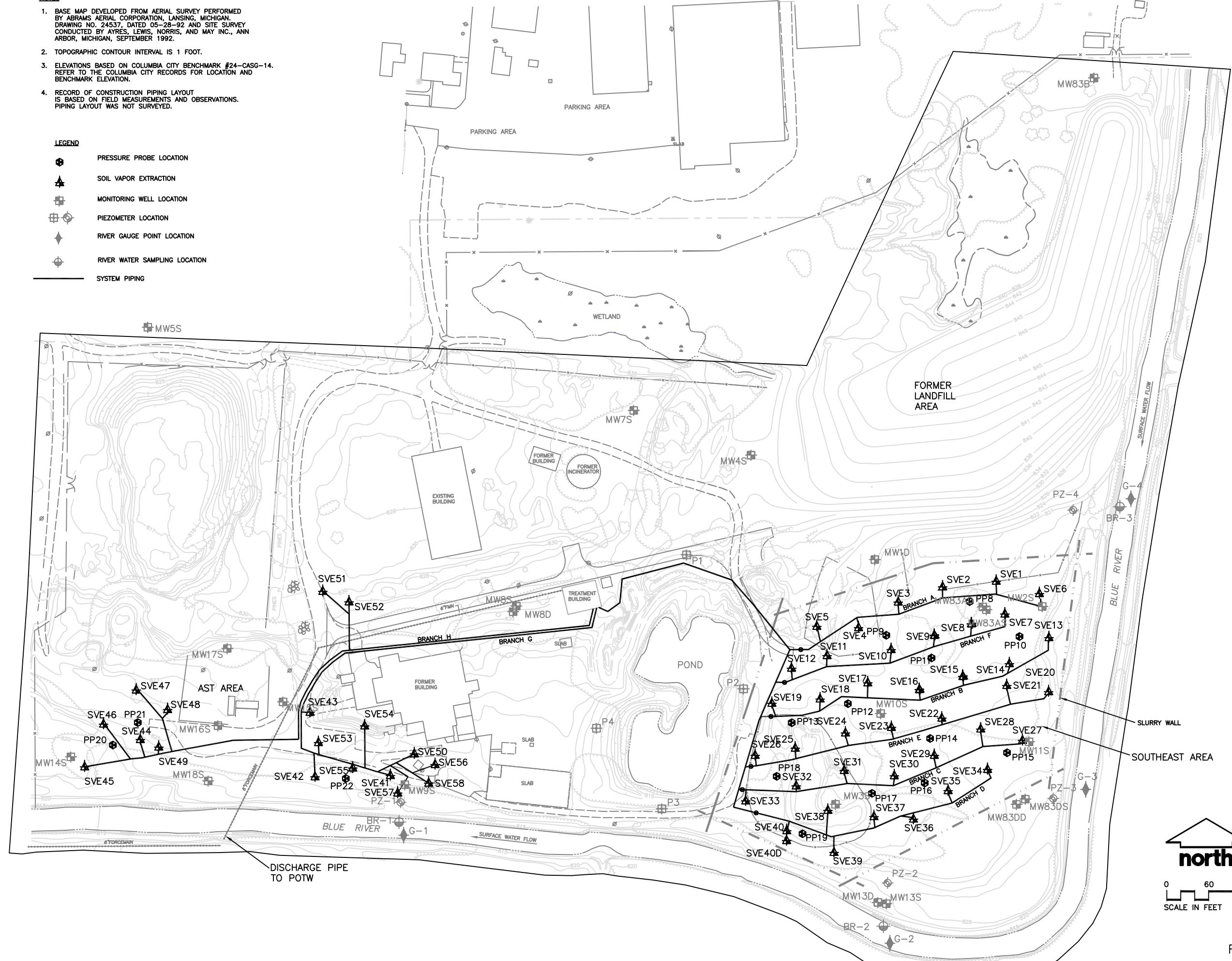
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Approved By BRT	
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NOTES

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4. RECORD OF CONSTRUCTION PIPING LAYOUT IS BASED ON FIELD MEASUREMENTS AND OBSERVATIONS. PIPING LAYOUT WAS NOT SURVEYED.

LEGEND

- PRESSURE PROBE LOCATION
- ▲ SOIL VAPOR EXTRACTION
- MONITORING WELL LOCATION
- ◆ PIEZOMETER LOCATION
- ◆ RIVER GAUGE POINT LOCATION
- ◆ RIVER WATER SAMPLING LOCATION
- SYSTEM PIPING



SITE PLAN - SOIL VAPOR EXTRACTION SYSTEM
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Printed
Sheet Number
1 of 1
Drawing Number
1008811
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Reference											
1/19/11											

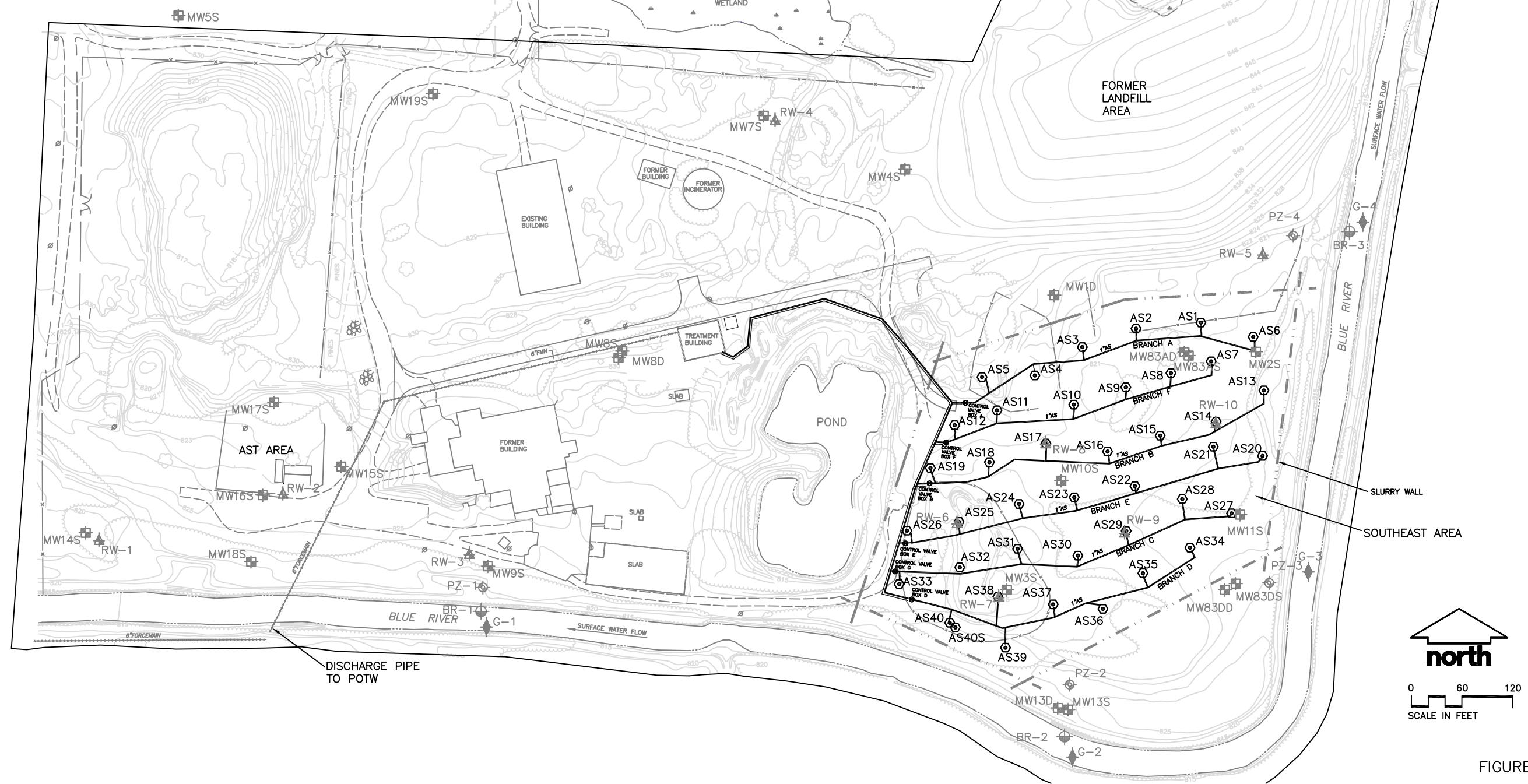
FIGURE 2

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN, DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. RECORD OF CONSTRUCTION PIPING LAYOUT IS BASED ON FIELD MEASUREMENTS AND OBSERVATIONS. PIPING LAYOUT WAS NOT SURVEYED.

LEGEND

- Ⓐ AIR SPARGING WELL LOCATION
- ▲ RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- ◆ PIEZOMETER LOCATION
- ◆ RIVER GAUGE POINT LOCATION
- ◆ RIVER WATER SAMPLING LOCATION
- SYSTEM PIPING



SITE PLAN - AIR SPARGING SYSTEM
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Sheet Number
1 of 1
Drawing Number
1008811
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FIGURE 3

Figure 4
Summary of Groundwater Treatment and SVE Systems Combined Air System Effluent Data
Wayne Reclamation & Recycling

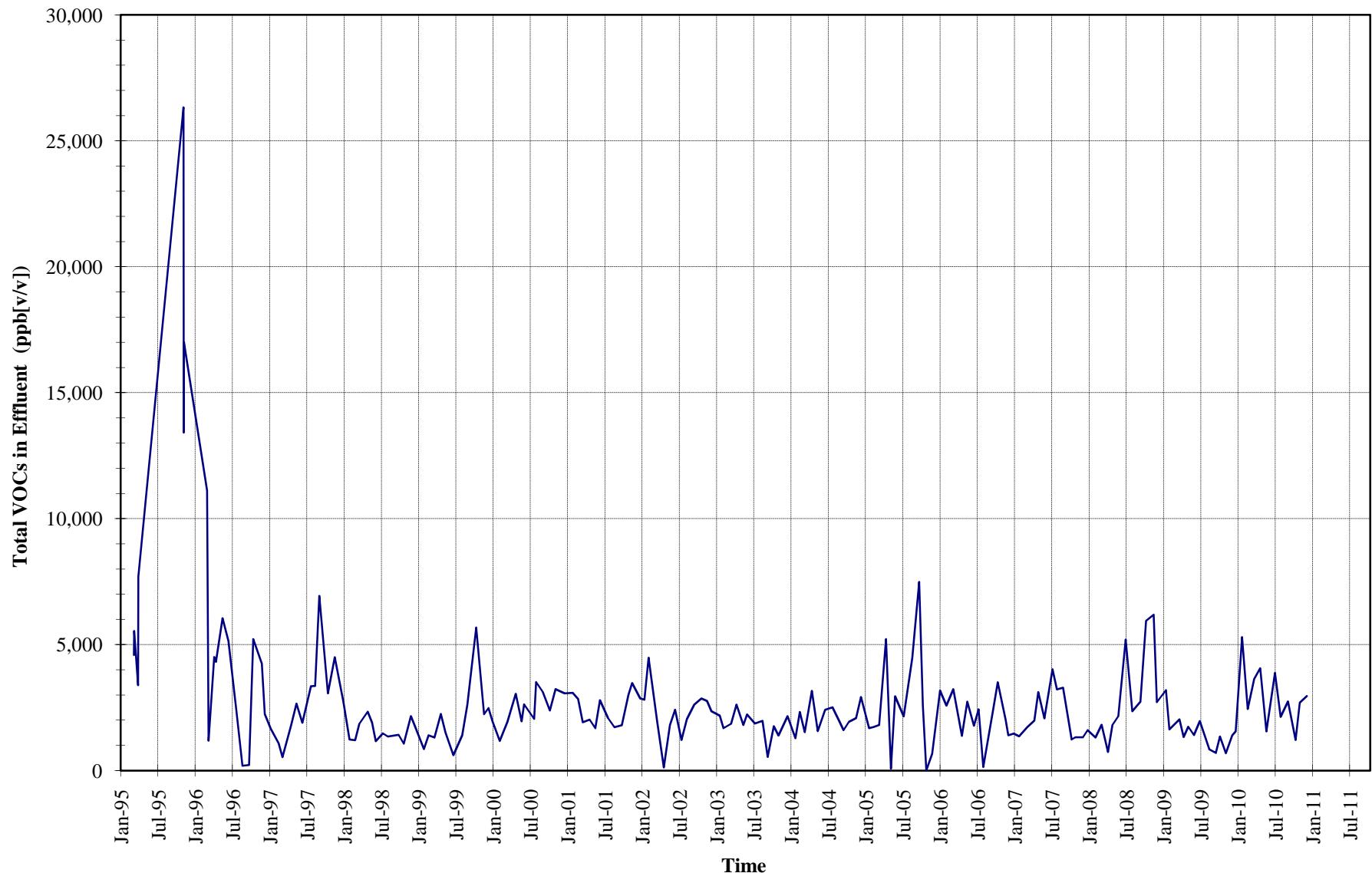


Figure 5
Cumulative and Sustained Groundwater Recovery
Wayne Reclamation & Recycling

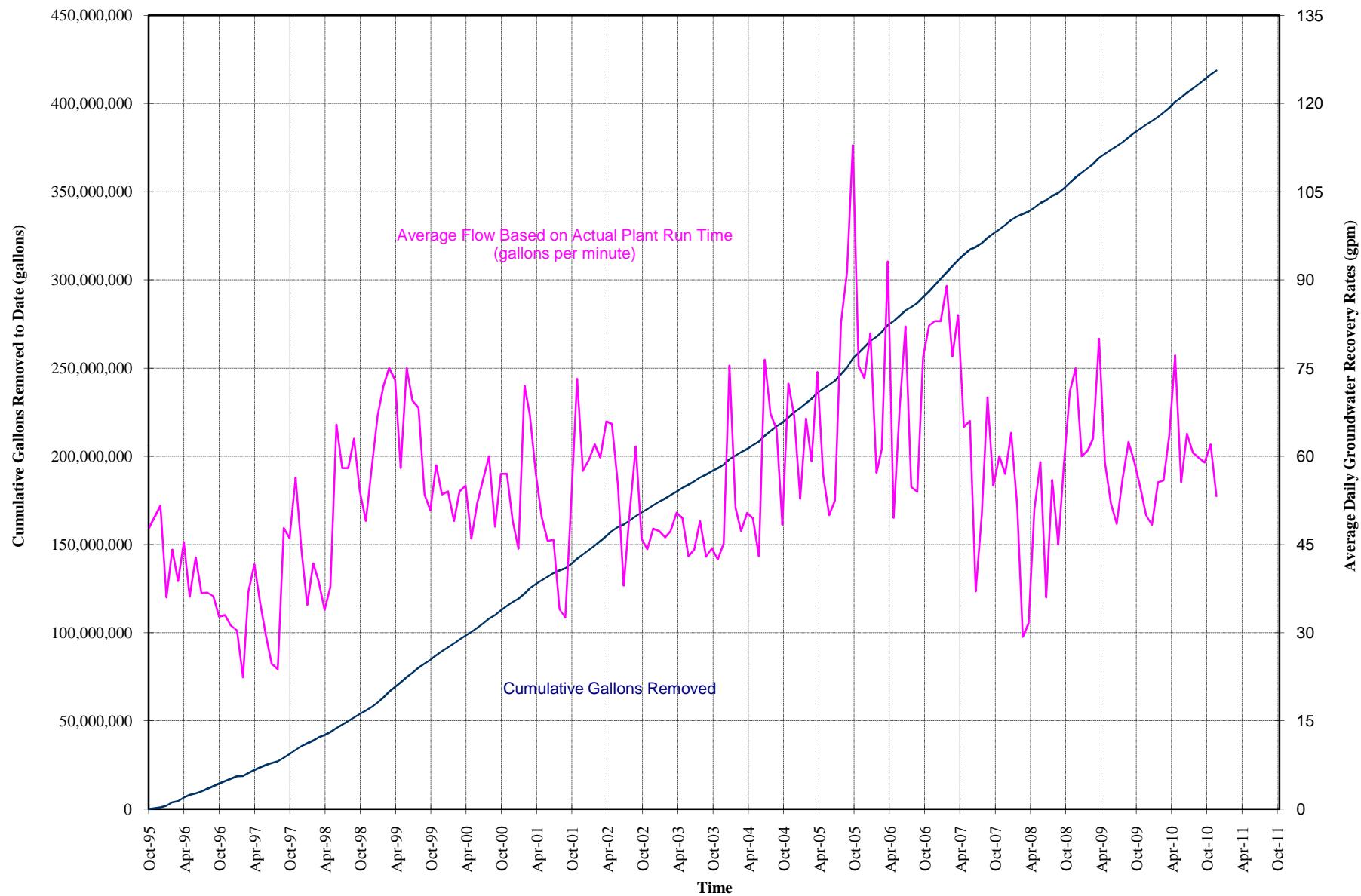
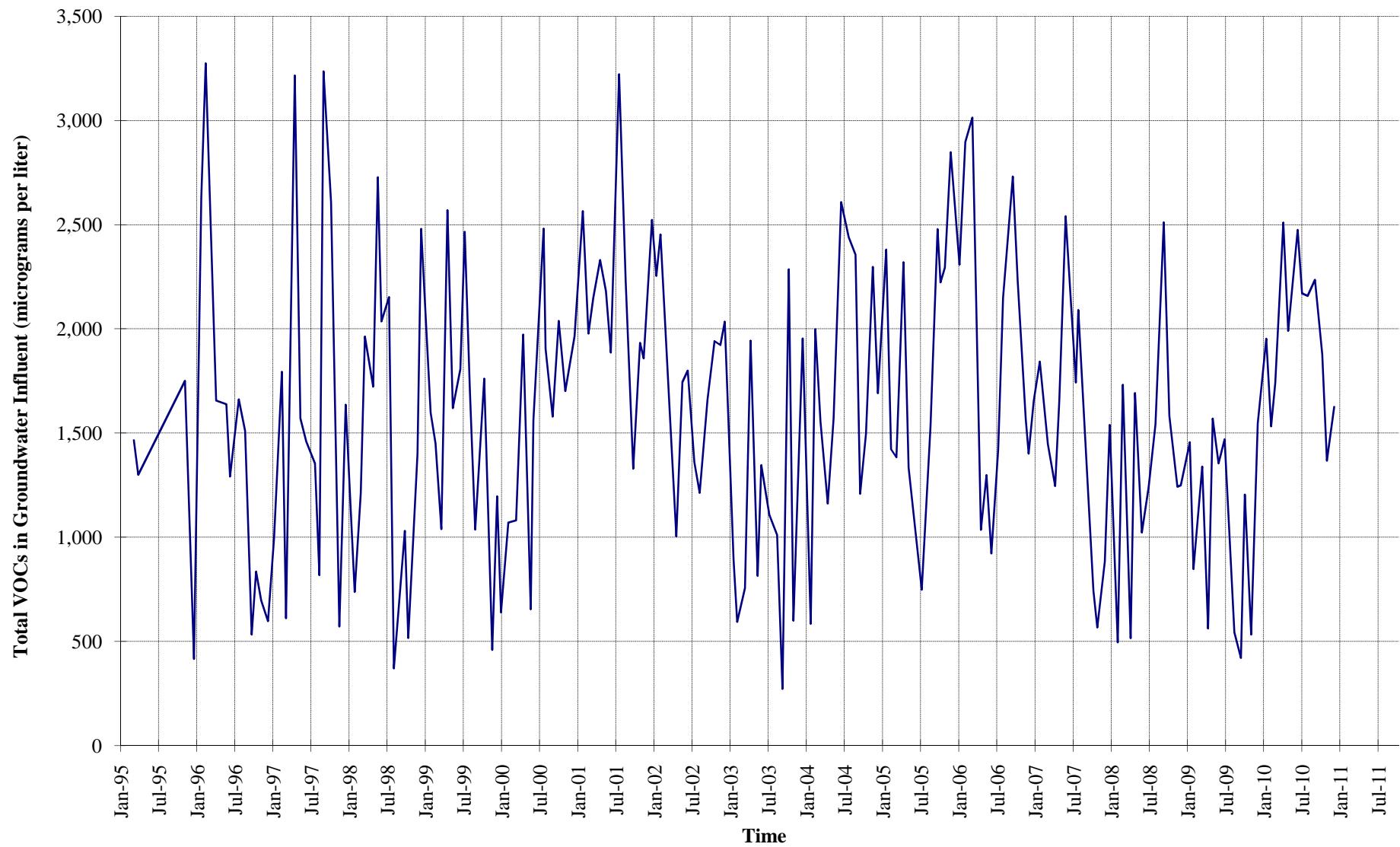


Figure 6
Summary of Groundwater Treatment System Influent Data
Wayne Reclamation & Recycling

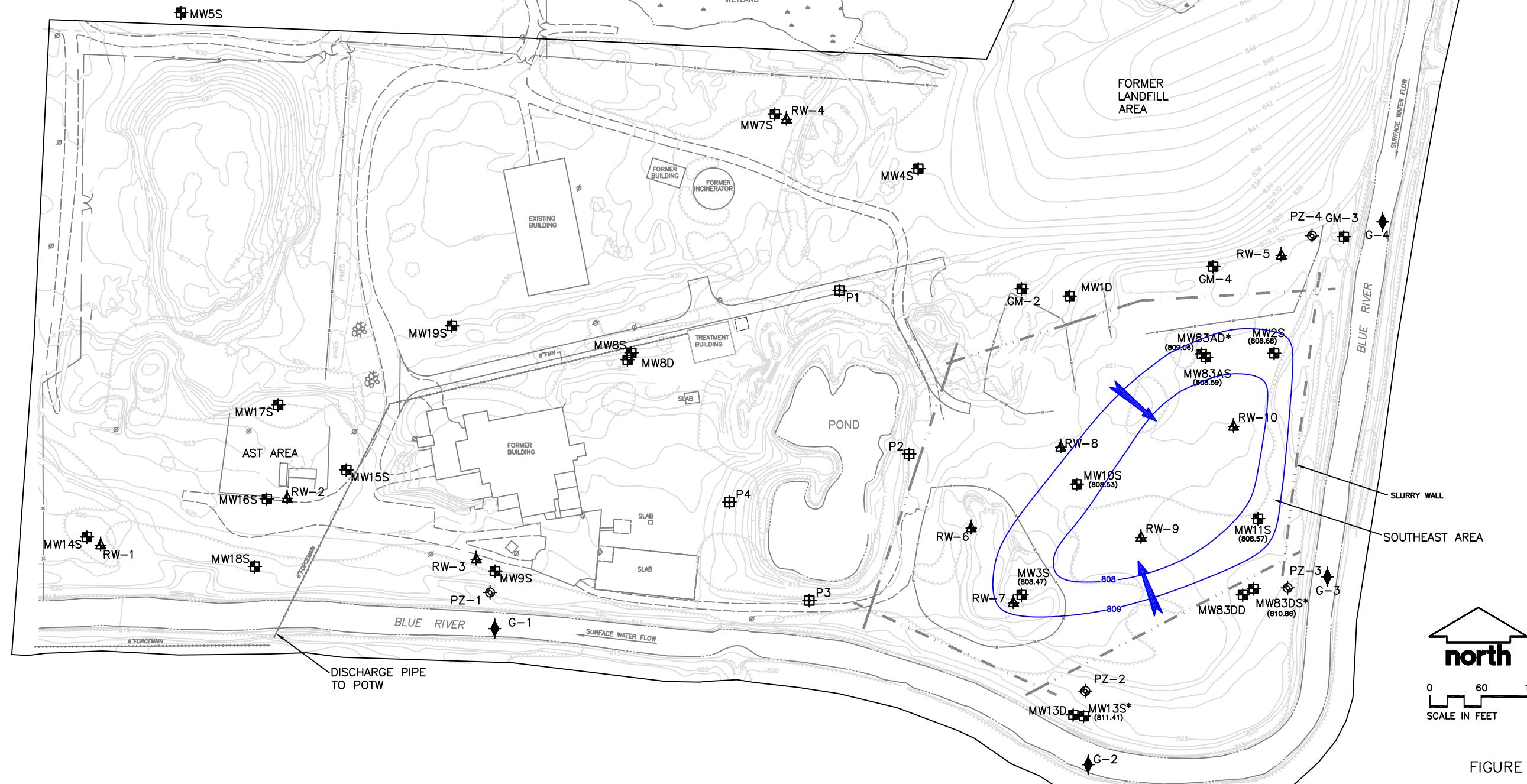


NOTES

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2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION



GROUNDWATER CONTOURS - JULY 2010
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Sheet Number
1 of 7
Drawing Number
1008811
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FIGURE 7-1

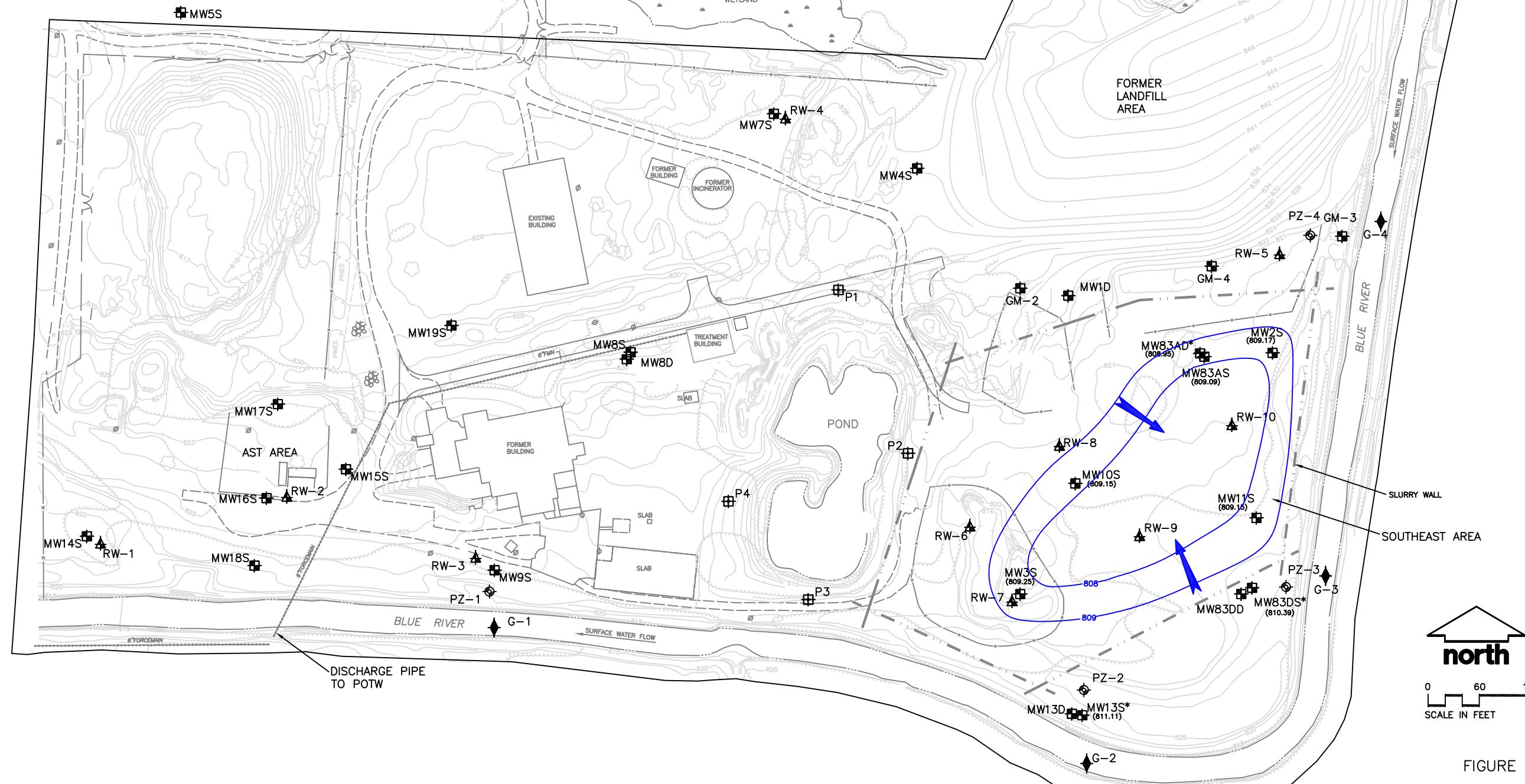
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NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN, DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION



GROUNDWATER CONTOURS – AUGUST 2010
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Sheet Number
2 of 7
Drawing Number
1008811
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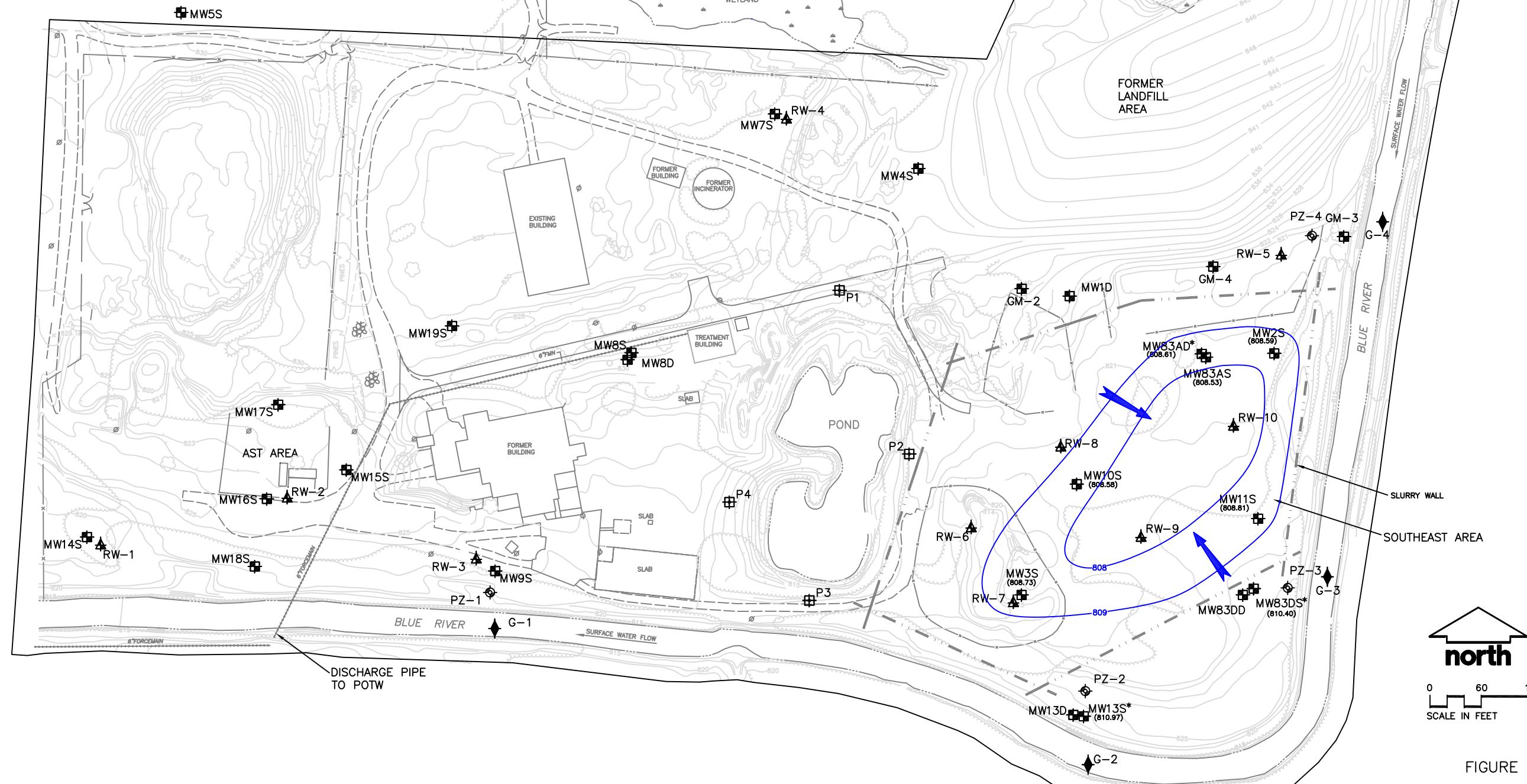
FIGURE 7-2

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN, DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION



GROUNDWATER CONTOURS – SEPTEMBER 2010
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Sheet Number
3 of 7
Drawing Number
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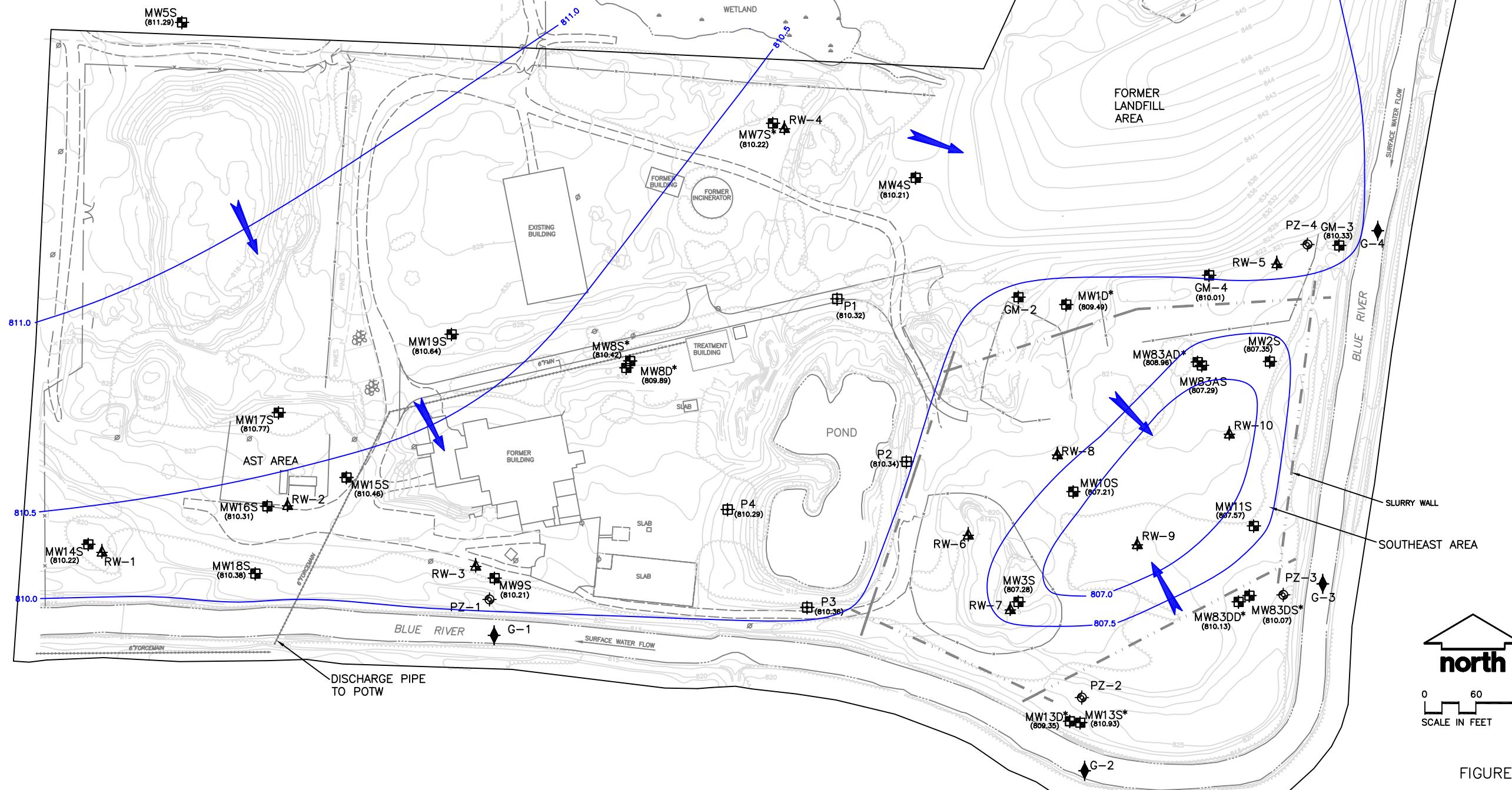
FIGURE 7-3

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN, DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION



GROUNDWATER CONTOURS – OCTOBER 2010
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4 of 7
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FIGURE 7-4

Release	Issuance/Revisions	Date	By	Approved	Developed By	Approved By	Dated By	Drawn By ATF
								01/18/11

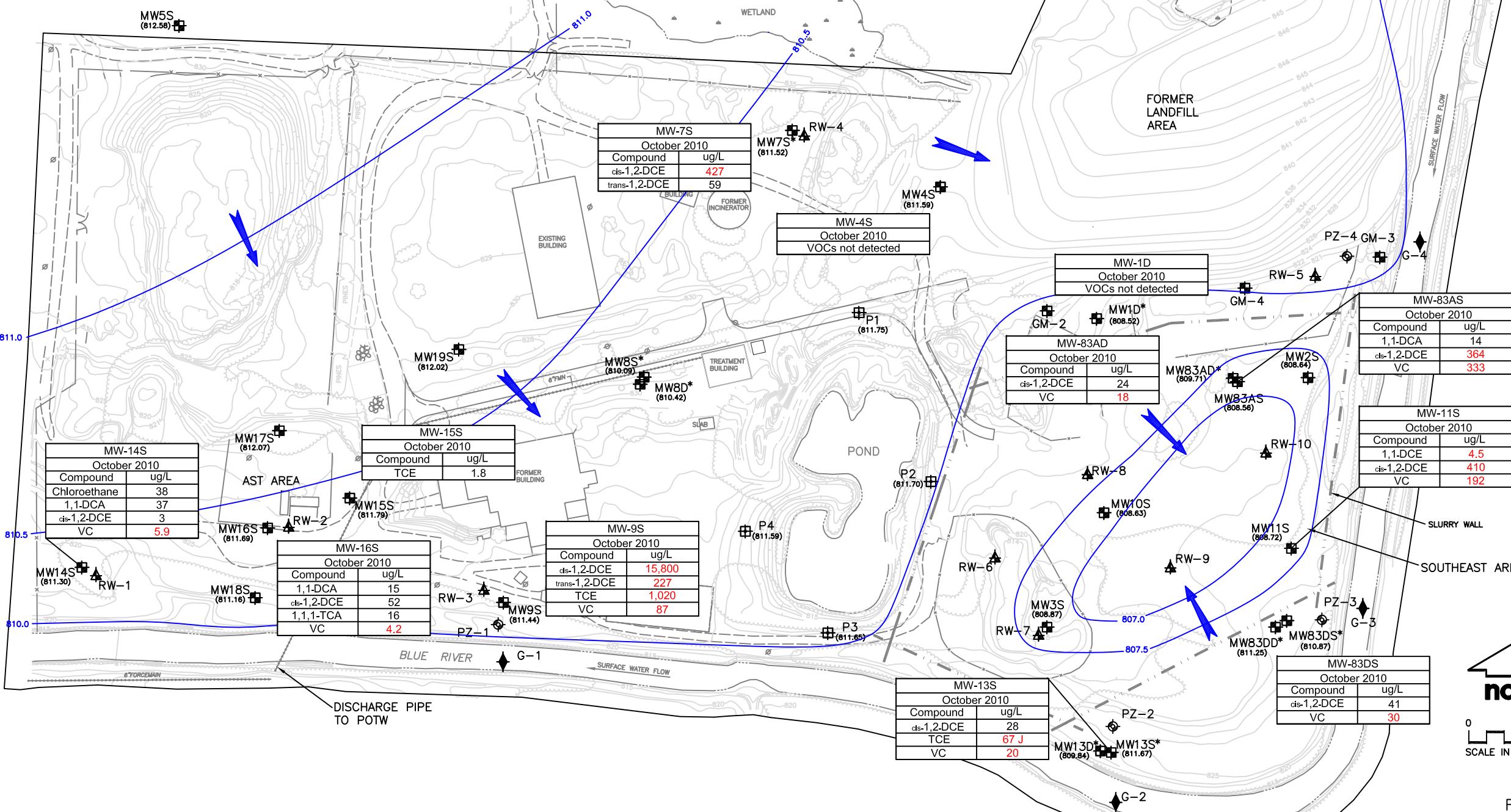
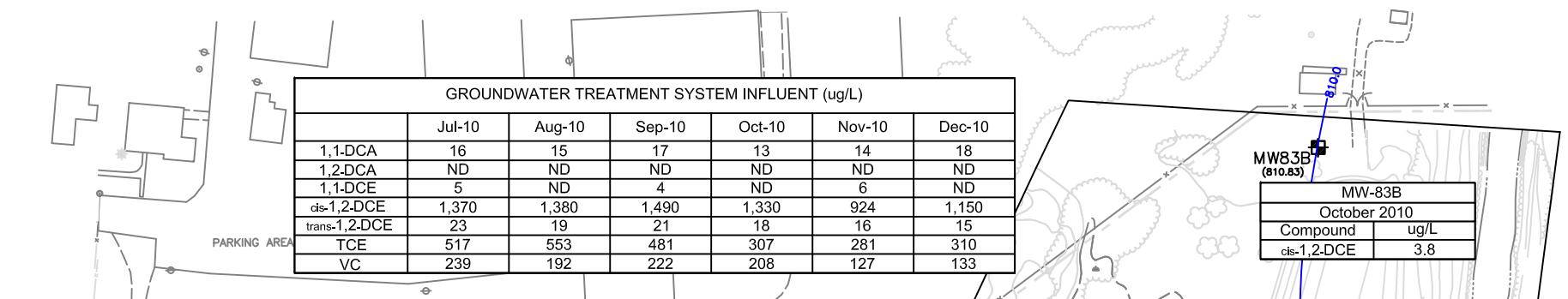
Reference
Consultants

NOTES

- BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN. DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
- TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
- ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
- INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
- WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.
- SAMPLE RESULTS ARE REPORTED IN MICROGRAMS PER LITER (ug/L). RED RESULTS EXCEED PRELIMINARY REMEDIATION GOALS (PRGs).

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION



ANALYTICAL RESULTS SUMMARY – OCTOBER 2010
SEMI-ANNUAL PROGRESS REPORT 31
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

Printed
Sheet Number
5 of 7
Drawing Number
1008811
D8



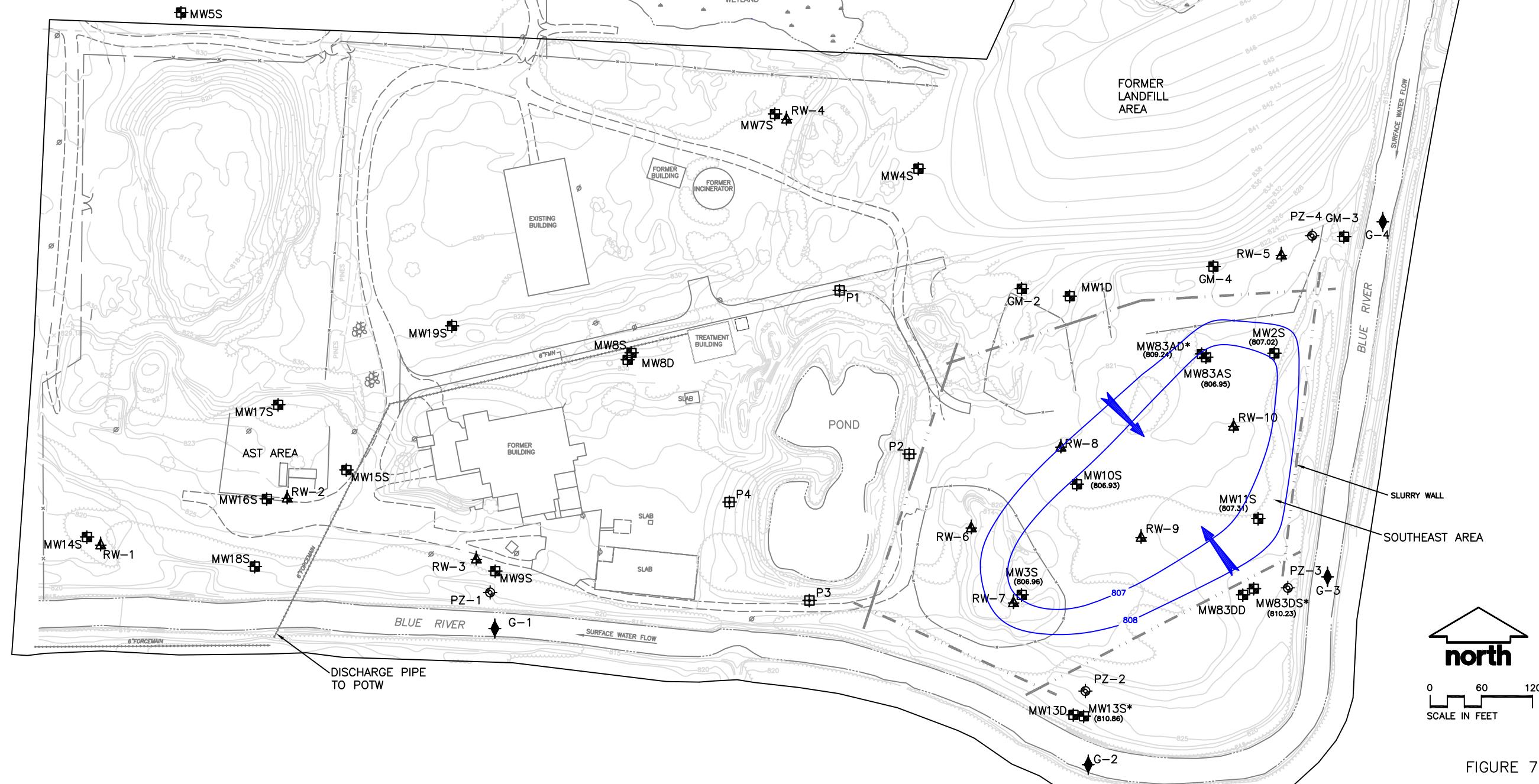
FIGURE 7-5

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN, DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION



GROUNDWATER CONTOURS – NOVEMBER 2010
SEMI-ANNUAL PROGRESS REPORT 31
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

Printed
Sheet Number
6 of 7
Drawing Number
1008811
010101 D9



MWH

Release	Issuance/Revisions	Date	By	Approved	Developed By BRT	Drawn By DTM	Date	Approved By BRT	Reference
							01/24/11		Consultants

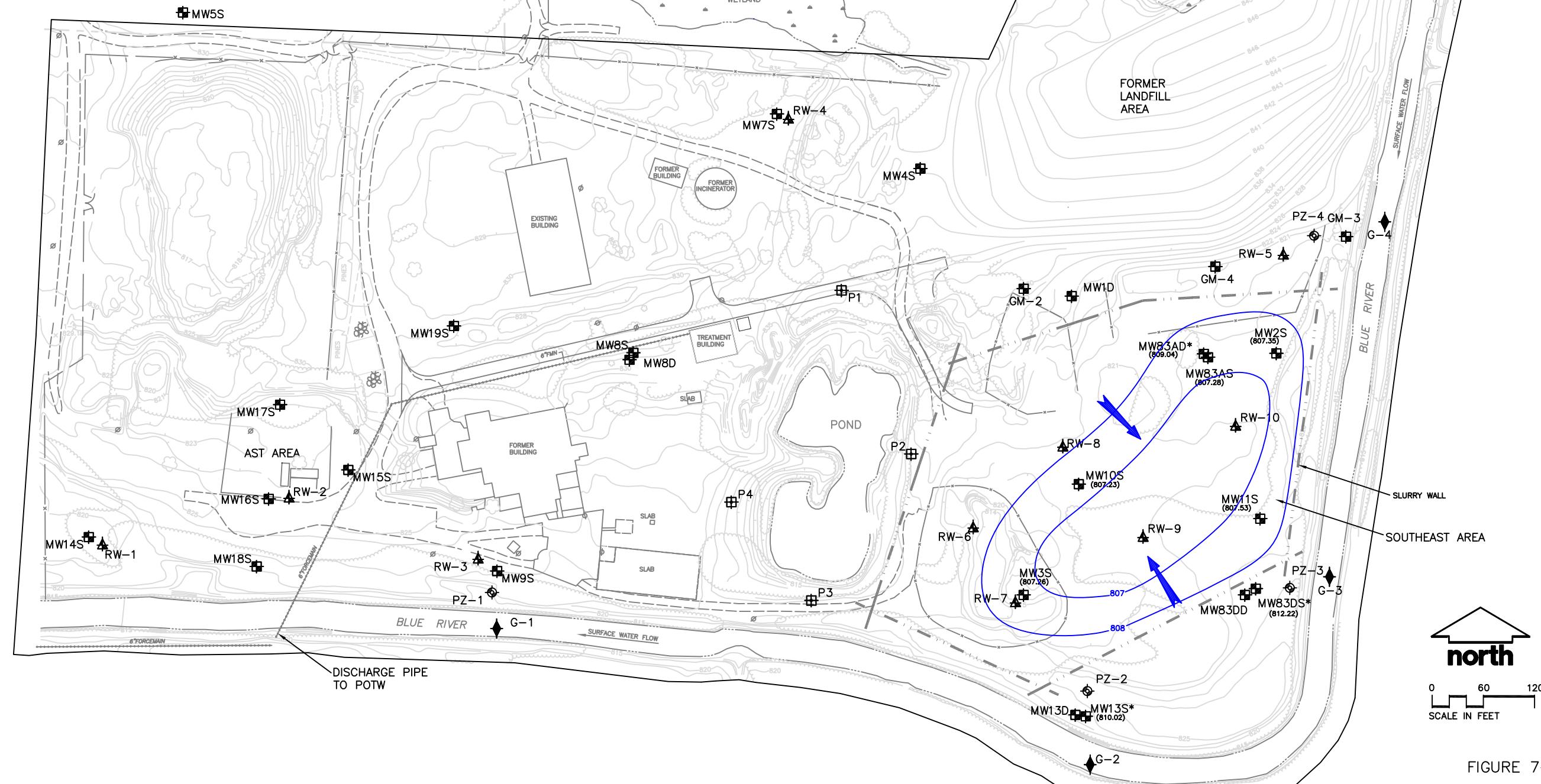
FIGURE 7-6

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN, DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION



GROUNDWATER CONTOURS – DECEMBER 2010
SEMI-ANNUAL PROGRESS REPORT 31
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

Printed
Sheet Number
7 of 7
Drawing Number
1008811
010101 D10



MWH

FIGURE 7-7

	Developed By DTM	Drawn By DTM
Reference		Date 01/24/11
Consultants		

Figure 8
Cumulative Volatile Organic Compounds Removed From Site - Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling

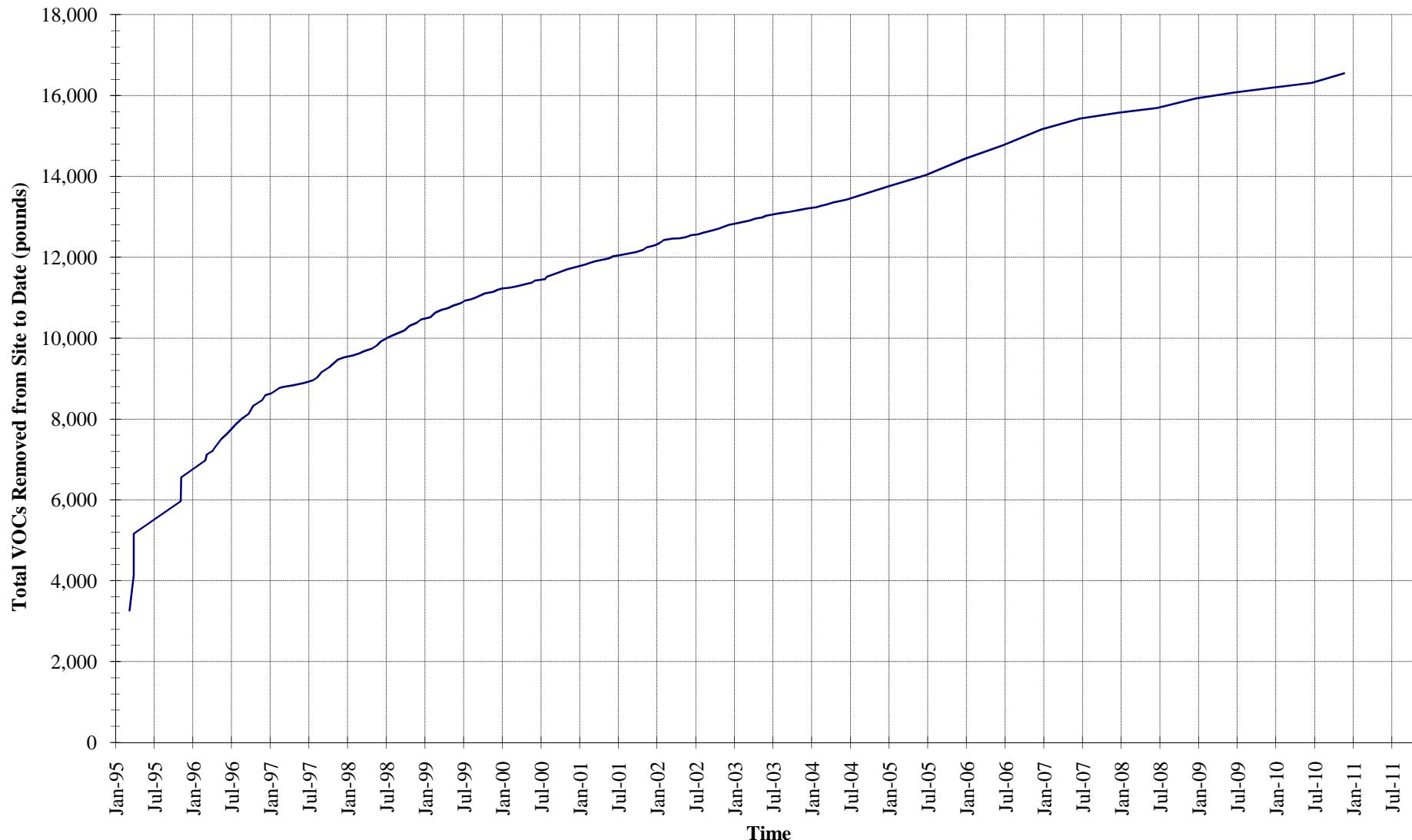
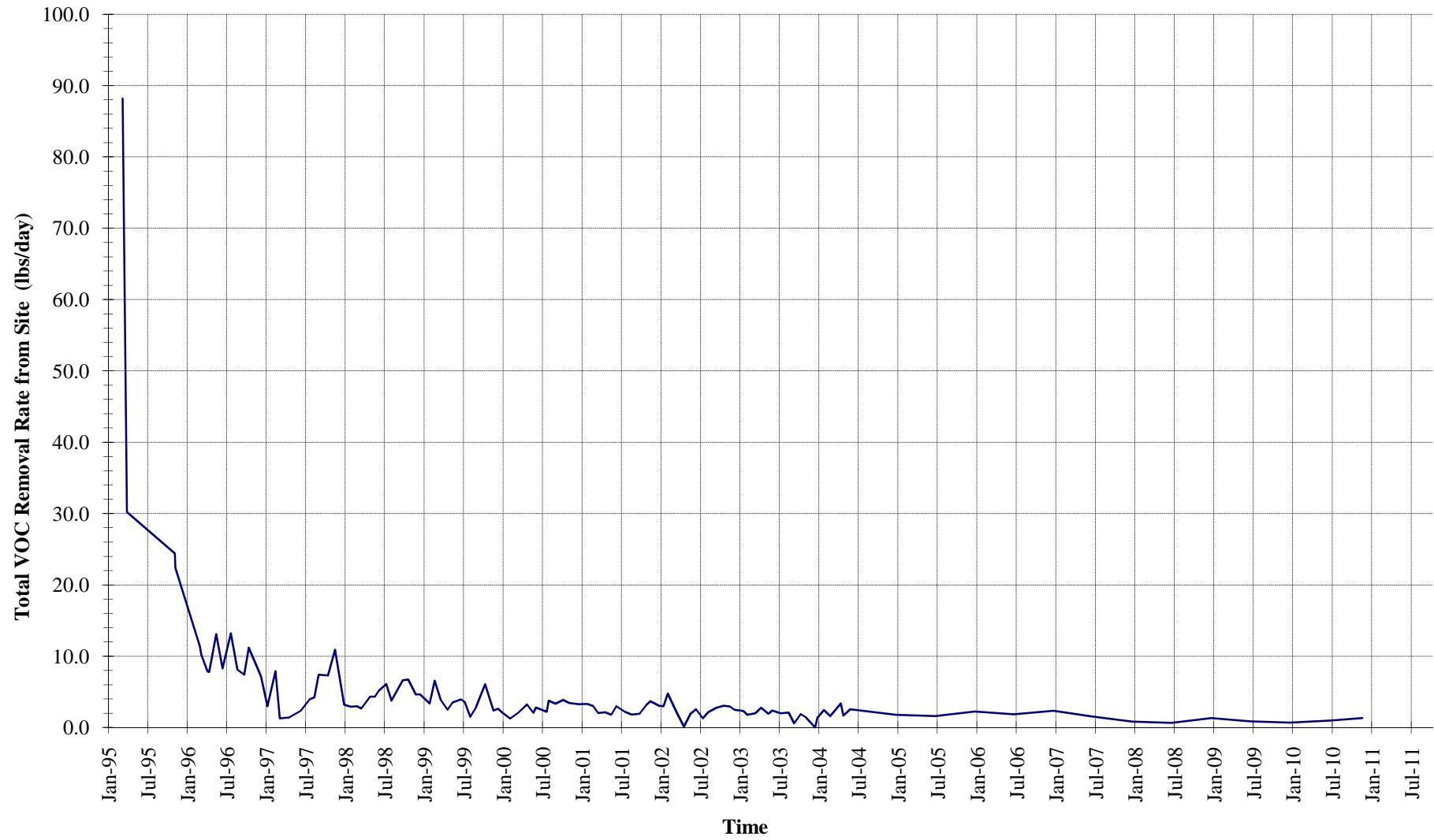


Figure 9
Summary of Site Volatile Organic Compound Removal Rates - Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling



APPENDIX A

LANDFILL SAMPLING DATA, OCTOBER 2010 SAMPLING EVENT



BURGESS & NIPLE

Mr. Jeffrey P. Walker
Outside Operations Manager
City of Columbia City
316 S. Towerview Drive
Columbia City, IN 46725

Re: City of Columbia City
Wayne Reclamation & Recycling Facility
October 2010 Groundwater Sampling Event

December 17, 2010

Burgess & Niple, Inc.

5085 Reed Road
Columbus, OH 43220
614 459.2050
Fax 614 451.1385

Dear Mr. Walker:

Burgess & Niple, Inc. (B&N) has completed this report to provide you with additional information that is not included in the formal report submitted to the U.S. Environmental Protection Agency (EPA), as required by the facility's *Operation and Maintenance Sampling and Analysis Plan* (OMSAP) (Geraghty & Miller, Inc., October 1993). B&N completed groundwater sampling and analysis of four monitoring wells located at the Wayne Reclamation and Recycling Facility (WRRF) in the City of Columbia City, Indiana on October 14, 2010. The following sections summarize the results of the most recent sampling event. Figure 1 displays the groundwater monitoring network. Attachment 1 includes the field-sampling sheets and chain-of-custody form completed during the most recent sampling event. Attachment 2 contains the analytical laboratory report submitted by TestAmerica Analytical Testing Corporation (TestAmerica). Time-versus-concentration plots generated from the groundwater quality data are presented in Attachment 3.

METHODS

Groundwater elevations were measured at each well using an electronic water-level measuring tape. The depth to the bottom of each well was also measured. Measurements were made to the nearest 0.01 foot and recorded on field-sampling sheets. The well stick-up was measured to the nearest 0.1 foot and recorded.

Field-sampling personnel completed a wellhead inspection of each well documenting any evidence of activity near the well, the condition of the protective casing, any insect or rodent intrusions, or other notable conditions. Information from this evaluation is included on the field-sampling sheets included in Attachment 1.

Disposable polyethylene bailers were used to purge each well of a minimum of five well volumes prior to sampling. Field parameters (pH, specific conductance, temperature, and turbidity) were measured and recorded during well purging. Sampling began once at least five well volumes were removed and the field parameters stabilized (within ± 10 percent). Purge water was disposed of on the ground away from each well, as specified by the facility's OMSAP.

Groundwater samples were collected from the four monitoring wells (GM-1, GM-2, GM-3, and GM-4). Field personnel filled the sample containers and placed them in a cooler that was chilled with ice to 4 degrees Celsius ($^{\circ}\text{C}$) or less. One duplicate was collected at GM-4 by splitting each bailer of water between two sets of sample containers. One field blank was collected to evaluate possible cross contamination from the field-sampling equipment. Distilled water was poured into a clean and unused disposable bailer and transferred into the sample containers. The laboratory prepared one trip blank (two 40-milliliter [ml] vials of deionized water) and sent it along with the sample containers. Groundwater samples were delivered to TestAmerica for analysis.

TestAmerica analyzed the groundwater samples from the four monitoring wells, the duplicate sample, and the equipment blank for:

- ammonia (Method 350.1/SM 18 4500 NH₃ H);
- chloride (Method 300.0);
- chemical oxygen demand (COD) (Hach 8000);
- sodium (Method 6010B); and
- volatile organic compounds (VOCs) (Method 8260B).

The trip blank was analyzed for VOCs only.

RESULTS

Table 1 includes all historical groundwater quality results reported for the WRRF, including the results of the October 14, 2010 groundwater sampling event. VOCs included in Table 1 are only those parameters historically detected in monitoring wells GM-1, GM-2, GM-3, and GM-4. All other VOCs have been reported below laboratory detection limits.

All but one of the inorganic concentrations reported for GM-1, GM-2, GM-3, and GM-4 during the most recent groundwater sampling event were within the respective range of historical results. The chloride concentration of 2.00 milligrams per liter (mg/l) is the lowest detected historical concentration for GM-4.

There were no VOCs reported above the laboratory detection limits in either GM-1 or GM-2 during the October 2010 sampling event. This is consistent with historical results for these two wells. All detected VOCs in GM-3 and GM-4 were within the respective range of historical concentrations.

Time-versus-concentration plots were constructed for ammonia, chloride, COD, sodium, and each of the historically detected VOCs. Historical results from each of the monitoring wells are included on each plot for comparative purposes. No increasing trends in inorganic constituents are evident, except for an increasing trend for COD in GM-3 from April 2008 through October 2009. Please note the October 2010 COD concentration of 23.0 mg/l in GM-3 is the lowest detected concentration in this well since October 2003.

Since the year 2000, it appears that each of the detected VOCs in GM-3 and GM-4 have stabilized, or depict a decreasing trend in concentration, with the exception of trichloroethene (TCE) and vinyl chloride in GM-4.

The following comments are made for the organic chemicals of concern (COCs) in wells GM-3 and GM-4 that have been historically detected above U.S. EPA Maximum Contaminant Levels (MCLs):

- GM-3 (cis-1,2-DCE) – Since October 2001, concentrations have shown an overall decreasing trend. The October 2010 concentration of 14.1 µg/l is below the primary MCL of 70 µg/l for cis-1,2-DCE.
- GM-3 (vinyl chloride) – concentrations have been reported above the MCL of 2 µg/l for each sampling event since June 1995, with the exception of the January 1996 sampling event which reported a non-detect value of <1.0 µg/l. The historical maximum concentration of 54 µg/l was reported in October 2001. Since then, concentrations of vinyl chloride have indicated an overall decreasing trend with the latest concentration reported at 12.6 µg/l in October 2010.
- GM-4 (cis-1,2-DCE) – concentrations spiked to a maximum of 570 µg/l in June 2001. Since then, concentrations have shown a decreasing trend with latest result of 122 µg/l reported for October 2010, which is above the primary MCL of 70 µg/l. Concentrations appear to have stabilized since April 2007.
- GM-4 (1,1,1-trichloroethane [TCA]) – in June 2001 concentrations spiked to 610 µg/l. Since 2001, concentrations appear to show an overall decreasing trend with the latest concentration detected at 171 µg/l which is below the primary MCL of 200 µg/l.
- GM-4 (trichloroethylene [TCE]) – concentrations for the past nine semiannual sampling events overall appear to be trending slightly downward as concentrations have decreased from 1,080 µg/l in October 2006 to 858 µg/l in October 2010. The TCE concentration continues to be above the MCL of 5 µg/l for TCE.
- GM-4 (vinyl chloride) – concentrations indicate an increasing trend since October 2005. The October 2010 laboratory result of 37.4 µg/l is the second highest concentration reported for this well. The MCL for vinyl chloride is 2 µg/l.
- Concentrations of ammonia (0.0720 mg/l), benzene (1.11 µg/l), toluene (4.31 µg/l), and total xylenes (2.36 µg/l), were detected in the equipment blank sample. As stated previously, the equipment blank sample is collected by pouring distilled water into a clean and unused disposable polyethylene bailer and transferred into the laboratory prepared sample containers. The equipment blank sample was collected prior to purging groundwater from GM-3 (see remarks and field parameter measurement times documented on the field sampling sheets for GM-3 in Attachment 1). GM-3 was purged and sampled with the same bailer as the equipment blank sample was collected from. The October 2010 ammonia concentration reported for GM-3 (0.489 mg/l) is within the historical concentration range for this well, therefore ammonia concentrations within this well don't appear to be biased. Concentrations of benzene, toluene, and total xylenes were not detected in any other sample analyzed during the October 2010 monitoring event, including the trip blank sample, therefore no cross contamination was observed. Additionally, concentrations of benzene, toluene, or total xylenes have never been detected in a groundwater sample collected from a monitoring well at this site

December 17, 2010

Page 4

since monitoring began in June 1995. Based on this information, B&N concludes the detected concentrations of ammonia, benzene, toluene, and total xylenes in the equipment blank sample to be anomalous and do not have an adverse effect on the sample collected from GM-3.

Table 2 includes historical groundwater elevations and other well data recorded at the facility. Groundwater elevation data prior to December 1999 was not available. Groundwater elevations decreased between April 2010 and October 2010 from a minimum of 1.42 foot at MW-4S to a maximum of 2.77 feet at GM-3.

If you have any questions or comments, please do not hesitate to call.

Sincerely,

Michael R. Akins
Project Geologist

MRA:cmc

Attachments

copy: Mr. Mike Cook, Columbia City (w/att)

Mr. Bruce Hamilton, Indiana Dept. of Environmental Management (w/att)

Ms. Diane McCausland, Engineering Management, Inc. (w/att)



SOURCES: BUNAR SURVEYORS AND WARZYN ENGINEERING, INC.



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SCALE VERIFICATION
THE BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY PICTURE REPRODUCTION SCALE

REV. NO.	DATE	DESCRIPTION	BY	APPR.	PROJECT NO. 2 GM-1	FILE NO. GM-1
					BURIED WELLS GM-1A-GM-4	PLOT NO. GM-1
					BURIED WELLS GM-1A-GM-4	PLOT NO. GM-1
					BURIED WELLS GM-1A-GM-4	PLOT NO. GM-1
					BURIED WELLS GM-1A-GM-4	PLOT NO. GM-1

MONITORING WELL LOCATION MAP-
POST-CLOSURE LANDFILL MONITORING
WAYNE RECLAMATION AND RECYCLING SITE
COLUMBIA CITY, INDIANA

Table 1
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL ¹	GM-1																																
			Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	
Inorganics																																			
Ammonia	mg/l	30 (HHA)	0.43	0.6	0.58	0.25	0.41	0.28	1.7	0.587	0.45	0.48	1.08	1.20	1.41	1.09	1.14	1.24	0.96	0.94	1.04	0.83	0.59	0.83	0.71	0.702	0.809	0.705	0.660	0.708	0.666	0.870	0.662	0.666	
Chloride	mg/l	250 (S)	130	120	80	48	39	35	80	64	31	37	26	23	46	39	44	31	31	37	51	51	43	43.6	50	38.0	53.0	64.3	42.4	45.4	37.7	58.4	47.8	55.0	
Chemical Oxygen Demand (COD)	mg/l	--	130	55	87	100	39	25	38	74	22	36	27	45	13	29	52	37	<5	14	5	31	9	30	24	17.6	<50.0	27.2	20.8	<50.0	<50.0	28.1	13.2		
Sodium	mg/l	--	60	59	54	26	22	19	18	22.8	18	15	19.2	17.5	19.0	22.9	22.2	21.5	17.6	17.1	23.1	25.5	22.3	17.7	21.3	17.6	26.2	37.9	24.5	25.4	18.4	27.0	21.2	25.4	
Volatile Organic Compounds																																			
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5		
1,1-Dichloroethane	ug/l	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
1,1-Dichloroethene	ug/l	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
cis-1,2-Dichloroethene	ug/l	70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
trans-1,2-Dichloroethene	ug/l	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
1,2-Dichloropropane	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
1,1,1-Trichloroethane	ug/l	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
1,1,2-Trichloroethane	ug/l	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Trichloroethylene	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Vinyl Chloride	ug/l	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Field Parameters																																			
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	6.90	7.58	6.94	7.49	7.55	7.11	7.17	7.40	6.72	6.91	7.24	7.14	7.31	6.84	6.76	7.42	7.34	6.98	6.85	6.85	6.64	6.72	
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	700	832	784	541	730	605	487	667	431	762	686	614	604	833	640	982	722	761	700	640	903	331	793
Temperature	°C	--	--	--	--	--	--	--	--	--	--	--	11.1	12.9	10.2	11.9	11.3	11.7	11.5	12.0	11.8	11.7	12.4	6.7	12.8	6.4	12.5	12.4	11.2	11.7	12.7	11.3	11.8		
Turbidity	NTU	5 (AL.)	--	--	--	--	--	--	--	--	--	--	111	455	133	182	140	664	55	258	44	134	282	105	113	75	228	86	165	59	156	76	207	54.0	

All other VOCs have been historically below laboratory detection limits.

¹ = U.S. EPA Maximum Cont

Table 1 (continued)
 Wayne Reclamation and Recycling Facility
 City of Columbia City
 Groundwater Monitoring Program

Parameter	Units	MCL ¹	GM-2																																
			Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	
Inorganics																																			
Ammonia	mg/l	30 (HHA)	2.6	2.6	2.4	1.6	3	2.6	3	2.64	1.7	1.8	1.99	1.80	2.03	2.10	1.46	1.43	1.35	1.30	1.28	1.18	1.13	1.09	0.98	0.958	1.08	0.973	1.06	1.10	0.886	0.954	0.928	1.09	
Chloride	mg/l	250 (S)	18	15	19	16	16	22	19	10	7	12	16	10	12	14	20	14	15	50	11	11	15	20.1	13	12.0	10.0	10.2	10.9	7.93	12.2	7.94	8.27	8.35	
Chemical Oxygen Demand (COD)	mg/l	--	30	<20	<20	<20	<20	<20	20	38	15	<15	17	8	<1	18	26	12	<5	<5	15	36	<5	28	14	10.1	100	11.1	14.5	<50.0	<50.0	<10.0	<10.0		
Sodium	mg/l	--	20	15	17	16	13	19	10	11.2	10.1	12.3	12.1	10.5	11.3	14.4	14.4	12.2	12.0	12.2	10.1	9.12	10.2	10.0	10.7	10.5	11.1	10.9	10.5	9.06	11.5	8.38	8.15	8.64	
Volatile Organic Compounds																																			
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10			
1,1-Dichloroethane	ug/l	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<2	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
1,1-Dichloroethene	ug/l	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
cis-1,2-Dichloroethene	ug/l	70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
trans-1,2-Dichloroethene	ug/l	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
1,2-Dichloropropane	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
1,1,1-Trichloroethane	ug/l	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
1,1,2-Trichloroethane	ug/l	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Trichloroethene	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Vinyl Chloride	ug/l	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Field Parameters																																			
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	7.13	7.65	7.06	7.59	7.41	7.10	7.32	7.61	7.05	6.83	7.33	7.04	7.24	6.78	6.89	7.26	7.17	6.99	6.99	6.93	6.61	6.79			
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	700	818	715	524	936	804	586	826	458	723	667	776	744	863	896	905	756	891	696	716	698	167	672			
Temperature	°C	--	--	--	--	--	--	--	--	11.3	12.9	10.6	11.4	10.2	10.6	11.5	12.1	12.7	12.0	12.3	11.9	12.3	6.1	12.4	10.0	12.5	12.1	11.1	10.9	12.6	11.0	11.7			
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	9	13	22	10.5	7.44	16.0	13	10	12	11	11	16	15	13	12	13	9.0	20	1.0	0.27	9.00	12.0			

All other VOC's have been historically below laboratory detection lim

¹ = U.S. EPA Maximum Contaminant Level

(HHA) = U.S. EPA Lifetime Human Health Advisory

(S) = Secondary U.S. EPA MCL

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL ¹	GM-3																															
			Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10
Inorganics																																		
Ammonia	mg/l	30 (HHA)	6	4.9	3.2	0.98	1.4	1	1.4	1.15	0.6	0.8	0.59	0.79	0.52	0.62	0.51	0.76	0.52	0.55	0.45	0.50	0.42	0.46	0.433	0.393	0.408	0.759	0.439	0.356	0.662	0.341	0.489	
Chloride	mg/l	250 (S)	23	14	25	32	20	40	25	42	24	20	29	44	22	28	24	32	67	27	42	21	24	51.7	35	27.0	25.0	26.2	21.7	21.4	38.5	24.4	37.1	18.0
Chemical Oxygen Demand (COD)	mg/l	--	120	80	38	33	<20	<20	25	24	22	<15	28	10	14	18	22	15	5	20	33	43	37	46	109	33.0	<50.0	50	49.3	59.6	74.8	92.9	25.9	23.0
Sodium	mg/l	--	26	14	14	17	11	16	10	19.2	16.4	16.5	17.7	21.5	15.8	15.0	12.2	20.4	36.2	19.7	15.7	17.2	12.5	21.8	22.3	19.9	17.2	17.8	19.4	14.4	25.5	19.2	17.5	19.1
Volatile Organic Compounds																																		
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	ug/l	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
cis-1,2-Dichloroethene	ug/l	70	84	33	26	17	17	36	94	51	85.6	60.7	110	82	61	150	85	100	52	72	59	17	57	55	34.4	41.1	27.0	32.3	15.4	22.3	12.6	13.4	10.8	14.1
trans-1,2-Dichloroethene	ug/l	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.6	0.9	<0.5	<1.0	<5	<1.0	<1.0	1	<1.0	2	<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1,1-Trichloroethane	ug/l	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1,2-Trichloroethane	ug/l	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Trichloroethene	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Vinyl Chloride	ug/l	2	10	<1.0	18	42	33	45	32	22.6	16.6	26	28	24	54	33	41	19	40	27	31	17	20	12.6	32.2	19.9	26.8	14.4	22.7	9.78	10.7	8.53	12.6	
Field Parameters																																		
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	7.74	7.88	7.08	7.99	6.89	7.50	7.99	8.03	7.86	7.19	7.72	7.51	7.53	6.96	7.38	7.79	7.87	7.41	7.24	7.36	7.20	7.29	
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	650	615	767	382	635	410	445	739	356	560	579	416	602	548	636	612	568	504	578	528	661	132	547	
Temperature	°C	--	--	--	--	--	--	--	--	--	16.9	13.4	12	8.5	14.6	8.6	16.7	6.7	14.3	8.4	15.7	7.7	17.7	3.4	12.7	6.5	17.4	8.3	15.0	7.5	15.4	8.10	15.6	
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	45	34	13	30.8	29.2	28.0	16	140	45	299	555	334	>1,000	726	1,000	907	1,000	1,000	686	470	901	592	

All other VOCs have been historically below laboratory detection lim

¹ = U.S. EPA Maximum Contaminant Level

(HHA) = U.S. EPA Lifetime Human Health Advisory

(S) = Secondary U.S. EPA MCL

(AL) = U.S. EPA Action Level

Table 1 (continued)
 Wayne Reclamation and Recycling Facility
 City of Columbia City
 Groundwater Monitoring Program

Parameter	Units	MCL ¹	GM-4																															
			Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10
Inorganics																																		
Ammonia	mg/l	30 (HHA)	0.37	0.33	0.34	0.28	0.13	0.37	3.1	0.697	0.29	0.24	0.32	0.46	0.36	0.33	0.29	0.25	0.31	0.23	0.22	0.19	0.30	0.35	0.37	0.546	0.277	0.262	0.208	0.279	0.360	0.261	0.269	
Chloride	mg/l	250 (S)	23	41	12	8.3	11	11	12	16	4.5	19	7	8	5	6	9	4	7	6	5	5	4	4.2	<5	14.0	5.00	2.22	2.46	2.62	2.85	2.65	2.51	2.00
Chemical Oxygen Demand (COD)	mg/l	--	220	65	47	55	20	<20	20	20	20	<15	13	2	6	28	13	8	<5	10	22	<5	39	24	18.6	<50.0	18	13.6	<50.0	<50.0	<10.0	16.0		
Sodium	mg/l	--	31	41	22	25	18	26	25	40	21	12	17.6	27.8	14.6	15.1	10.2	11.6	11.0	7.86	8.98	8.43	7.86	16.0	13.7	21.2	9.16	8.9	7.12	7.43	9.64	7.54	7.31	
Volatile Organic Compounds																																		
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	150	<10	<10	<10	<10	<10	<10	<10	<33.3	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5		
1,1-Dichloroethane	ug/l	--	<1.0	<1.0	<1.0	10	12	13	11	16	14	13	19	18	21	25	17	20	26	20	15	14	21	20.6	23.8	17.2	18.5	14.5	17.0	15.6	14.9	17.9	14.9	
1,1-Dichloroethene	ug/l	7	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	3.2	5.2	5	3.7	<5	4.2	7.0	7.1	6.0	5.1	6.2	4.9	3.8	6.1	<2	4.0	4.2	4.92	4.22	3.48	3.03	3.77	2.99	2.40	3.59	2.61
cis-1,2-Dichloroethene	ug/l	70	130	140	190	260	250	320	250	323	243	250	190	270	570	250	230	180	190	98	110	100	110	110	173	228	141	143	120	117	122	115	149	122
trans-1,2-Dichloroethene	ug/l	100	<1.0	<1.0	<1.0	12	14	16	13	16.3	13	14	13	14	18	20	14	14	15	11	8	8	6.9	11	11.6	14.9	12.0	9.44	8.64	9.72	8.45	7.91	10.3	8.05
1,2-Dichloropropane	ug/l	5	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<3.3	<5.0	<5.0	6	<1.0	<1.0	<1	4	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
1,1,1-Trichloroethane	ug/l	200	180	<1.0	200	140	140	210	180	144	193	143	170	210	610	260	330	380	260	94	180	180	229	248	216	220	188	191	169	137	150	171		
1,1,2-Trichloroethane	ug/l	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<3.3	<5	<0.5	0.8	0.9	<0.5	0.8	0.8	0.7	0.6	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
Trichloroethene	ug/l	5	410	380	530	280	430	490	500	462	556	435	440	640	1,900	860	870	1,300	840	400	630	740	730	830	980	1,080	953	939	851	844	891	898	952	858
Vinyl Chloride	ug/l	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.8	5.2	3.7	4.9	4	8	6	7	5	2	4	2	3	3	3.6	<1	11.2	11.0	14.3	13.6	19.0	34.6	28.5	46.7	37.4	
Field Parameters																																		
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	7.34	7.02	6.99	7.51	7.23	7.23	7.35	7.70	7.29	6.92	7.45	7.10	7.24	6.75	7.07	7.36	7.29	7.13	7.18	6.97	6.71	6.84	
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	690	964	1,141	553	880	660	471	729	413	732	619	618	827	922	1,199	964	794	720	664	584	724	155	686
Temperature	°C	--	--	--	--	--	--	--	--	--	--	15.2	12.9	11.9	10.8	12.1	9.9	13.1	11.1	12.4	10.8	13.3	11.3	13.7	5.4	10.7	9.5	13.7	11.3	12.0	10.3	13.3	10.2	12.8
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	13	21	29	22.9	17.4	37.0	25	51	30	56	67	118	116	58	133	157	47	81	39	51	27	92.0	

All other VOCs have been historically below laboratory detection lim

¹ = U.S. EPA Maximum Contaminant Level

(HHA) = U.S. EPA Lifetime Human Health Advisory

(S) = Secondary U.S. EPA MCL

(AL) = U.S. EPA Action Level

Duplicate samples collected at GM-4.

-- = Not Applicable

* = MEK contaminated deionized water.

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL ¹	Duplicate (GM-4)																						
			Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09		
Inorganics																									
Ammonia	mg/l	30 (HHA)	0.25	0.31	0.40	0.34	0.34	0.29	0.26	0.36	0.26	0.22	0.20	0.27	0.36	0.38	0.542	0.444	0.274	0.293	0.267	0.295	0.301	0.305	0.286
Chloride	mg/l	250 (S)	19	7	7	5	8	8	4	7	5	5	4	4.9	<5	7.00	<5.00	2.31	2.25	2.43	2.88	2.67	2.52	2.04	
Chemical Oxygen Demand (COD)	mg/l	--	<15	24	4	8	22	16	11	<5	<5	10	26	7	26	20	17.6	<50.0	21.2	11.1	<50.0	61.5	<50.0	<10.0	20.2
Sodium	mg/l	--	12.8	21.5	28.1	14.0	15.8	10.5	7.32	11.1	7.80	8.76	8.67	7.86	16.9	14.6	21.5	8.70	8.8	7.23	7.02	7.33	7.99	8.06	7.35
Volatile Organic Compounds																									
2-Butanone (Methyl ethyl ketone)	ug/l	--	<33.3	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	
1,1-Dichloroethane	ug/l	--	15	19	19	21	24	18	27	28	20	14	14	15	20	22.4	24.2	16.9	20.8	14.3	18.2	15.5	16.2	17.1	18.9
1,1-Dichloroethene	ug/l	7	4.5	<5	4.4	6.2	6.9	6.6	5.1	6.2	5.0	3.7	6.1	72.0	3.7	4.4	5.31	4.06	4.12	3.04	3.66	2.92	2.37	3.32	3.10
cis-1,2-Dichloroethene	ug/l	70	246	190	290	540	180	280	260	210	110	110	100	110	175	212	142	139	115	121	119	120	142	147	
trans-1,2-Dichloroethene	ug/l	100	13	13	14	17	20	15	15	15	11	8	8	7.7	10.0	12.3	15.5	11.5	10.9	8.47	10.4	8.40	8.17	9.81	9.58
1,2-Dichloropropane	ug/l	5	<3.3	<5.0	<5.0	6	<1.0	<1.0	<1.0	<1	<1	<1	<1	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
1,1,1-Trichloroethane	ug/l	200	143	170	230	580	180	410	410	270	99	170	190	170	180	237	249	205	231	187	201	192	134	142	156
1,1,2-Trichloroethane	ug/l	5	<3.3	<5	<0.5	0.8	0.9	<0.5	0.9	0.8	0.6	0.5	<0.5	<2.0	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
Trichloroethene	ug/l	5	434	440	650	1,800	610	840	1,400	820	440	620	780	710	860	1,030	1,070	884	971	833	926	1,000	843	890	778
Vinyl Chloride	ug/l	2	4.3	4	9	5	6	5	2	4	2	2	3	4.2	<1	12.1	11.8	13.8	16.8	18.9	33.7	26.3	29.0	44.6	43.0
Field Parameters																									
pH	S.U.	6.5-8.5 (S)	--	7.34	7.02	6.99	7.51	7.23	7.23	7.35	7.70	7.29	6.92	7.45	7.10	7.24	6.75	7.07	7.36	7.29	7.13	7.18	6.97	6.71	6.84
Specific Conductance	umhos/cm	--	690	964	1,141	553	880	660	471	729	413	732	619	618	827	922	1,199	964	794	720	664	584	724	155	686
Temperature	°C	--	15.2	12.9	11.9	10.8	12.1	9.9	13.1	11.1	12.4	10.8	13.3	11.3	13.7	5.4	10.7	9.5	13.7	11.3	12.0	10.3	13.3	10.2	12.8
Turbidity	NTU	5 (AL)	--	13	21	29	22.9	17.4	37.0	25	51	30	56	67	118	116	58	133	157	47	81	39	51	27	92.0

All other VOCs have been historically below laboratory detection limit.

¹ = U.S. EPA Maximum Contaminant Level

(HHA) = U.S. EPA Lifetime Human Health Advisory

(S) = Secondary U.S. EPA MCL

(AL) = U.S. EPA Action Level

Duplicate samples collected at GM-4.

-- = Not Applicable

* = MEK contaminated deionized water.

Table I (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL ¹	Field Blank																														
			Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10
Inorganics																																	
Ammonia	mg/l	30 (HHA)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.22	<0.010	<0.010	0.54	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.0500	<0.0500	0.0910	<0.05	<0.05	0.235	0.0580	0.0720
Chloride	mg/l	250 (S)	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	19	<1.0	<1.0	<1.0	<1.0	1	<1	2	<1.0	<1.0	<1	<5	<5	<5	<5	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00		
Chemical Oxygen Demand (COD)	mg/l	--	<20	<20	<20	<20	<20	<20	115	33	<15	<15	4	<1.0	<1.0	3	<5	<5	<5	7	39	<5	<5	<10	<10	<50.0	<10.0	<50.0	<50.0	<10.0	<10.0		
Sodium	mg/l	--	<0.50	<0.50	<0.50	<0.50	14	<0.50	76	<0.20	94.2	<0.10	0.28	0.33	0.20	0.403	0.18	0.442	0.10	<0.10	<0.10	0.11	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	
Volatile Organic Compounds																																	
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	612 *	<12.5	<12.5	<12.5	<12.5	<12.5		
1,1-Dichloroethane	ug/l	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
1,1-Dichloroethene	ug/l	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.00	<1.00	<1.00	<1.00	<1.00	
cis	70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<1.00		
cis-1,2-Dichloroethene	ug/l	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
trans-1,2-Dichloroethene	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.00	<1.00	<1.00	<1.00	<1.00	
1,2-Dichloropropane	ug/l	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
1,1,1-Trichloroethane	ug/l	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
1,1,2-Trichloroethane	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
Trichloroethene	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
Vinyl Chloride	ug/l	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
Field Parameters																																	
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Temperature	°C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

All other VOCs have been historically below laboratory detection lim

¹ = U.S. EPA Maximum Contaminant Level

(HHA) = U.S. EPA Lifetime Human Health Advisory

(S) = Secondary U.S. EPA MCL

(AL) = U.S. EPA Action Level

Duplicate samples collected at GM-4.

-- = Not App

Table 1 (continued)
 Wayne Reclamation and Recycling Facility
 City of Columbia City
 Groundwater Monitoring Program

Parameter	Units	MCL ¹	Trip Blank																														
			Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10
Inorganics																																	
Ammonia	mg/l	30 (HHA)	<0.030	<0.030	<0.030	<0.030	--	--	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Chloride	mg/l	250 (S)	<1.0	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Chemical Oxygen Demand (COD)	mg/l	--	<20	<20	<20	<20	--	--	<5	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Sodium	mg/l	--	<0.50	<0.50	<0.50	<0.50	--	--	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Volatile Organic Compounds																																	
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5		
1,1-Dichloroethane	ug/l	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
1,1-Dichloroethene	ug/l	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
cis-1,2-Dichloroethene	ug/l	70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
trans-1,2-Dichloroethene	ug/l	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
1,2-Dichloropropane	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5.0	<5.0	<1.0	<1.0	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
1,1,1-Trichloroethane	ug/l	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
1,1,2-Trichloroethane	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			
Trichloroethene	ug/l	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
Vinyl Chloride	ug/l	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1	<1	<1	<2	<1	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
Field Parameters																																	
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Specific Conductance	µmhos/cm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Temperature	°C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

All other VOCs have been historically below laboratory detection lim

¹ = U.S. EPA Maximum Contaminant Level

(HHA) = U.S. EPA Lifetime Human Health Advisory

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Duplicate samples collected at GM-4.

-- = Not Applicable

* = MEK contaminated deionized water.

Table 2
City of Columbia City, Indiana
Wayne Reclamation & recycling Facility
Groundwater Elevations & Well Data

Well No.	TOC Elevation (feet amsl)	Depth to Water (feet BTOC)																						
		12/13/99	6/29/00	12/5/00	6/4/01	10/25/01	4/22/02	10/15/02	4/18/03	10/17/03	4/23/04	10/22/04	4/15/05	10/14/05	4/25/06	10/13/06	4/12/07	10/12/07	4/18/08	10/17/08	4/23/09	10/22/09	4/27/10	10/14/10
GM-1	841.03	31.26	30.19	31.61	30.31	29.54	29.24	31.64	31.51	30.22	30.68	31.07	29.84	31.70	31.04	30.66	29.03	31.20	28.01	31.29	27.63	30.62	29.64	31.14
GM-2	833.24	23.65	22.08	23.60	22.18	21.45	21.12	23.75	23.32	22.20	22.69	23.21	21.67	24.05	23.08	22.76	21.05	23.23	19.77	23.43	19.42	22.84	21.70	23.15
GM-3	822.86	11.74	10.69	12.45	11.73	8.46	10.51	12.40	12.08	11.16	11.95	12.37	11.79	12.97	12.42	11.67	10.28	12.61	10.21	12.72	9.41	12.44	9.77	12.54
GM-4	827.37	16.54	15.33	17.18	16.39	13.51	15.17	17.21	16.79	16.59	17.14	16.56	17.99	17.30	16.32	15.16	17.48	14.76	17.63	13.97	17.24	14.69	17.39	
MW-4S	842.94	--	--	33.43	32.03	31.52	30.92	33.55	33.17	32.02	32.42	32.90	31.48	33.76	32.80	32.49	30.89	32.95	29.51	33.21	29.27	32.56	31.52	32.94
Well No.	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)																						
		12/13/99	6/29/00	12/5/00	6/4/01	10/25/01	4/22/02	10/15/02	4/18/03	10/17/03	4/23/04	10/22/04	4/15/05	10/14/05	4/25/06	10/13/06	4/12/07	10/12/07	4/18/08	10/17/08	4/23/09	10/22/09	4/27/10	10/14/10
GM-1	841.03	809.77	810.84	809.42	810.72	811.49	811.79	809.39	809.52	810.81	810.35	809.96	811.19	809.33	809.99	810.37	812.00	809.83	813.02	809.74	813.40	810.41	811.39	809.89
GM-2	833.24	809.59	811.16	809.64	811.06	811.79	812.12	809.49	809.92	811.04	810.55	810.03	811.57	809.19	810.16	810.48	812.19	810.01	813.47	809.81	813.82	810.40	811.54	810.09
GM-3	822.86	811.12	812.17	810.41	811.13	814.40	812.35	810.46	810.78	811.70	810.91	810.49	811.07	809.89	810.44	811.19	812.58	810.25	812.65	810.14	813.45	810.42	813.09	810.32
GM-4	827.37	810.83	812.04	810.19	810.98	813.86	812.20	810.16	810.58	811.59	810.78	810.23	810.81	809.38	810.07	811.05	812.21	809.89	812.61	809.74	813.40	810.13	812.68	809.98
MW-4S	842.94	--	--	809.51	810.91	811.42	812.02	809.39	809.77	810.92	810.52	810.04	811.46	809.18	810.14	810.45	812.05	809.99	813.43	809.73	813.67	810.38	811.42	810.00
Well No.	TOC Elevation (feet amsl)	Well Stick-Up (feet)																						
		12/13/1999	6/29/2000	12/5/2000	6/4/2001	10/25/2001	4/22/2002	10/15/2002	4/18/2003	10/17/2003	4/23/2004	10/22/2004	4/15/2005	10/14/2005	4/25/2006	10/13/2006	4/12/2007	10/12/2007	4/18/2008	10/17/2008	4/23/2009	10/22/2009	4/27/2010	10/14/2010
GM-1	841.03	2.1	--	1.9	1.9	2.1	1.8	2.1	1.8	1.8	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	
GM-2	833.24	2.5	--	2.2	2.2	2.5	2.2	2.5	2.2	2.2	2.4	2.5	2.5	2.4	2.5	2.4	2.5	2.4	2.4	2.5	2.4	2.4	2.5	
GM-3	822.86	2.2	--	2.0	2.0	2.3	1.9	2.3	1.9	2.0	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
GM-4	827.37	3.3	--	2.6	2.6	3.0	2.5	3.0	2.6	2.7	2.6	2.9	2.9	2.9	3.4	3.0	2.9	2.9	2.9	3.0	2.9	3.0	3.0	
MW-4S	842.94	--	--	--	--	3.0	2.6	--	--	1.5	2.8	2.7	2.8	2.7	2.7	2.7	2.7	2.6	2.8	3.0	2.8	2.8	2.8	
Well No.	TOC Elevation (feet amsl)	Depth-to-Bottom (feet BTOC)																						
		12/13/1999	6/29/2000	12/5/2000	6/4/2001	10/25/2001	4/22/2002	10/15/2002	4/18/2003	10/17/2003	4/23/2004	10/22/2004	4/15/2005	10/14/2005	4/25/2006	10/13/2006	4/12/2007	10/12/2007	4/18/2008	10/17/2008	4/23/2009	10/22/2009	4/27/2010	10/14/2010
GM-1	841.03	35.10	34.84	34.84	34.84	34.86	34.81	34.81	34.91	35.05	34.96	34.97	34.97	35.00	35.02	35.01	34.99	34.98	35.00	35.00	35.03	35.06	35.04	
GM-2	833.24	39.08	38.87	38.86	38.88	38.83	38.83	38.83	38.85	38.82	38.82	38.82	38.85	38.81	38.82	38.81	38.83	38.84	38.83	38.83	38.90	38.89	38.89	
GM-3	822.86	27.95	27.72	27.75	27.75	27.71	27.71	27.71	27.68	27.72	27.68	27.68	27.68	27.65	27.66	27.65	27.67	27.67	27.67	27.65	27.65	27.63	27.63	
GM-4	827.37	28.17	27.93	27.95	27.95	27.91	27.91	27.89	27.92	27.90	27.90	27.90	27.90	27.88	27.90	27.90	27.88	27.90	27.90	27.90	27.89	27.93	27.92	
MW-4S	842.94	--	--	39.74	39.74	40.93	40.88	--	--	--	40.85	40.85	40.85	40.88	40.84	40.85	40.83	40.86	40.85	40.86	40.85	40.90	40.90	

Data prior to 12/99 unavailable.

ATTACHMENT 1

**FIELD-SAMPLING SHEETS
AND
CHAIN-OF-CUSTODY FORM**

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY -
CITY OF COLUMBIA CITY, IN

WELL NO.: GM-1 DATE: 10-14-10 PROJECT NO.: 48755

FIELD BOOK NO.: N/A WEATHER: Sunny Clear Cool 60°

SAMPLING CREW: Botley

WELLHEAD INSPECTION:

Evidence of Activities at Well: No Yes Comment: _____

Well Protector Condition: Good Poor Comment: _____

Insect/Rodent Intrusion: No Yes Comment: _____

Other: NONE

FIELD EQUIPMENT USED:

Water Level Indicator: Solinst Soiltest Plopper

Date Calibrated: _____

pH Meter: Hanna Orion Oakton

10-14-10

Conductivity Meter: YSI Oakton Myron L

Thermometer: YSI Hanna Oakton

Turbidity: Hach HF Scientific

Dissolved Oxygen: Corning No. 1 Corning No. 2

Other: NONE

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing Top Protector Well Stick-up _____

Measured Level: 1st 2nd 3rd Average _____

Time/Depth: 1110AM/ 31.14 1111AM/ 31.14 1111AM/ 31.14

Well Bottom: Measured Distance from RP: 35.04 110V = .64 SWV = 3.18

PURGING:

Purging Device: Dedicated Pump Disposable Bailer
Grundfos Pump Bladder Pump Other

Time Elapsed During Purging (mins.): 14 Total Gallons Removed During Purging: 5.0+ Gallons

MEASUREMENTS	TIME (IN MINUTES)						
	1118AM	1121AM	1123AM	1125AM	1127AM	1129AM	1132AM
Amount of Water Removed (mls.)	1	1.0	2.0	3.0	4.0	4.5	5.0
pH (S.U.)	6.76	6.69	6.69	6.69	6.72	6.72	6.72
Conductivity (umhos/cm)	895	818	806	803	801	796	793
Temperature (°C)	12.1	11.8	11.9	11.8	11.8	11.8	11.8
Turbidity (NTU)	382	101	65	63	57	52	54
TDS (ppm)	-	-	-	-	-	-	-
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-

SAMPLING:

Sampling Device: Dedicated Pump Disposable Bailer
Grundfos Pump Bladder Pump Other

Time Sampling Began: 1135AM Time Completed: 1145AM

Characteristics of Water: Odor NONE Color Initially Orange then Cleared
Turbidity initially Slightly Silty Other NONE

QA/QC Sample Collected: Duplicate Replicate Matrix Spike/Matrix Spike Duplicate None

REMARKS:

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY -
CITY OF COLUMBIA CITY, IN

WELL NO.: GM-2 DATE: 10-14-10 PROJECT NO.: 48755

FIELD BOOK NO.: H/A WEATHER: Sunny Clear Mid 65°

SAMPLING CREW: Botley

WELLHEAD INSPECTION:

Evidence of Activities at Well: No Yes Comment: _____

Well Protector Condition: Good Poor Comment: _____

Insect/Rodent Intrusion: No Yes Comment: _____

Other: NONE

FIELD EQUIPMENT USED:

Water Level Indicator: Solinst Soiltest Plopper Date Calibrated: _____

pH Meter: Hanna Orion Oakton 10-14-10

Conductivity Meter: YSI Oakton Myron L

Thermometer: YSI Hanna Oakton

Turbidity: Hach HF Scientific

Dissolved Oxygen: Corning No. 1 Corning No. 2

Other: NONE

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing Top Protector Well Stick-up

Measured Level: 1st 2nd 3rd Average

Time/Depth: 1152 AM / 23.15 1152 AM / 23.15 1152 AM / 23.15 23.15

Well Bottom: Measured Distance from RP: .38.89 HWV = 2.57 SWV = 12.83

PURGING:

Purging Device: Dedicated Pump Disposable Bailer

Grundfos Pump Bladder Pump Other

Time Elapsed During Purging (mins.): 22 Total Gallons Removed During Purging: 13.0 + Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	1158AM	1202PM	1205PM	1208PM	1211PM	1214PM	1217PM	1220PM
Amount of Water Removed (mls.)	1	2.0	4.0	6.0	8.0	10.0	12.0	13.0
pH (S.U.)	6.87	6.80	6.79	6.78	6.80	6.80	6.80	6.79
Conductivity (umhos/cm)	610	651	677	679	675	674	672	672
Temperature (°C)	13.0	11.9	11.8	11.7	11.8	11.6	11.7	11.7
Turbidity (NTU)	44	81	29	14	9	11	9	12
TDS (ppm)	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	-

SAMPLING:

Sampling Device: Dedicated Pump Disposable Bailer

Grundfos Pump Bladder Pump Other

Time Sampling Began: 1225PM Time Completed: 1235 PM

Characteristics of Water: Odor NONE Color CLEAR

Turbidity CLEAR Other NONE

QA/QC Sample Collected: Duplicate Replicate Matrix Spike/Matrix Spike Duplicate None

REMARKS:

* Water orangish for first ~2-3 Gallons then cleared.

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY -
CITY OF COLUMBIA CITY, IN

WELL NO.: GM-3 DATE: 10-14-10 PROJECT NO.: 48755

FIELD BOOK NO.: N/A WEATHER: Sunny to Partly Cloudy Windy Mild 70°

SAMPLING CREW: Botley

WELLHEAD INSPECTION:

Evidence of Activities at Well: No Yes Comment: _____
 Well Protector Condition: Good Poor Comment: _____
 Insect/Rodent Intrusion: No Yes Comment: _____
 Other: NONE

FIELD EQUIPMENT USED:

Water Level Indicator:	Solinst <input checked="" type="checkbox"/>	Soiltest <input type="checkbox"/>	Plopper <input type="checkbox"/>	Date Calibrated:
pH Meter:	Hanna <input type="checkbox"/>	Orion <input type="checkbox"/>	Oakton <input checked="" type="checkbox"/>	<u>10-14-10</u>
Conductivity Meter:	YSI <input type="checkbox"/>	Oakton <input checked="" type="checkbox"/>	Myron L <input type="checkbox"/>	<u>/</u>
Thermometer:	YSI <input type="checkbox"/>	Hanna <input type="checkbox"/>	Oakton <input checked="" type="checkbox"/>	<u>/</u>
Turbidity:	Hach <input checked="" type="checkbox"/>	HF Scientific <input type="checkbox"/>	<u>/</u>	<u>/</u>
Dissolved Oxygen:	Corning No. 1 <input type="checkbox"/>	Corning No. 2 <input type="checkbox"/>	<u>/</u>	<u>/</u>
Other:	<u>NONE</u>			<u>/</u>

STATIC WATER LEVEL:

Reference Point (RP) Elevation:	Top Casing <input checked="" type="checkbox"/>	Top Protector <input type="checkbox"/>	Well Stick-up <input type="checkbox"/>	
Measured Level:	1st <input type="checkbox"/>	2nd <input type="checkbox"/>	3rd <input type="checkbox"/>	Average <input type="checkbox"/>
Time/Depth:	<u>148PM / 12.54</u>	<u>148PM / 12.54</u>	<u>148PM / 12.54</u>	<u>12.54</u>
Well Bottom: Measured Distance from RP:	<u>27.63</u>	<u>148V = 2.46</u>	<u>5WV = 12.30</u>	

PURGING:

Purging Device: Dedicated Pump Disposable Bailer
 Grundfos Pump Bladder Pump Other
 Time Elapsed During Purging (mins.): 20 Total Gallons Removed During Purging: 13.0+ Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	154PM	157PM	159PM	202PM	205PM	208PM	212PM	214PM
Amount of Water Removed (mls.)	1	2.0	4.0	6.0	8.0	10.0	12.0	13.0
pH (S.U.)	7.69	7.32	7.29	7.27	7.27	7.28	7.29	7.29
Conductivity (umhos/cm)	446	534	548	547	549	546	547	547
Temperature (°C)	17.9	16.0	15.6	15.6	15.6	15.6	15.7	15.6
Turbidity (NTU)	111	123	314	473	528	544	662	592
TDS (ppm)	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	-

SAMPLING:

Sampling Device: Dedicated Pump Disposable Bailer
 Grundfos Pump Bladder Pump Other

Time Sampling Began: 215PM Time Completed: 225PM

Characteristics of Water: Odor NONE Color Brown
 Turbidity Silty Other NONE

QA/QC Sample Collected: Duplicate Replicate Matrix Spike/Matrix Spike Duplicate None

REMARKS:

* Equipment Blank taken out 140 PM before purging and Sampling this well.

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY -
CITY OF COLUMBIA CITY, IN

WELL NO.: GM-4 DATE: 10-14-10 PROJECT NO.: 48755

FIELD BOOK NO.: HJA WEATHER: Sunny to Partly Cloudy Warm 70°

SAMPLING CREW: Boyley

WELLHEAD INSPECTION:

Evidence of Activities at Well: No Yes Comment: _____

Well Protector Condition: Good Poor Comment: _____

Insect/Rodent Intrusion: No Yes Comment: _____

Other: _____ NONE

FIELD EQUIPMENT USED:

Water Level Indicator:	Solinst <input checked="" type="checkbox"/>	Soiltest <input type="checkbox"/>	Plopper <input type="checkbox"/>	Date Calibrated:			
pH Meter:	Hanna <input type="checkbox"/>	Orion <input type="checkbox"/>	Oakton <input checked="" type="checkbox"/>	10-14-10			
Conductivity Meter:	YSI <input type="checkbox"/>	Oakton <input checked="" type="checkbox"/>	Myron L <input type="checkbox"/>				
Thermometer:	YSI <input type="checkbox"/>	Hanna <input type="checkbox"/>	Oakton <input checked="" type="checkbox"/>				
Turbidity:	Hach <input checked="" type="checkbox"/>	HF Scientific <input type="checkbox"/>					
Dissolved Oxygen:	Corning No. 1 <input type="checkbox"/>	Corning No. 2 <input type="checkbox"/>					
Other:	<u>NONE</u>						

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing Top Protector Well Stick-up _____

Measured Level: 1st 2nd 3rd Average

Time/Depth: 1246PM / 17.39 1246PM / 17.39 1246PM / 17.39

Well Bottom: Measured Distance from RP: 27.92 11.21 = 1.72 5 WU = 8.58

PURGING:

Purging Device: Dedicated Pump Disposable Bailer
Grundfos Pump Bladder Pump Other

Time Elapsed During Purging (mins.): 17 Total Gallons Removed During Purging: 9.0+ Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	1255PM	1257PM	100PM	103PM	105PM	108PM	110PM	112PM
Amount of Water Removed (mls.)	1	1.0	3.0	5.0	6.0	7.0	8.0	9.0
pH (S.U.)	6.99	6.85	6.84	6.82	6.83	6.84	6.84	6.84
Conductivity (umhos/cm)	563	667	701	696	693	692	688	686
Temperature (°C)	13.9	13.3	13.3	12.8	12.9	12.8	12.8	12.8
Turbidity (NTU)	86	104	60	35	48	61	71	92
TDS (ppm)	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	-

SAMPLING:

Sampling Device: Dedicated Pump Disposable Bailer
Grundfos Pump Bladder Pump Other

Time Sampling Began: 115PM Time Completed: 125PM

Characteristics of Water: Odor NONE Color Clear w/ Slight Brownish Tint
Turbidity Cloudy Other NONE

QA/QC Sample Collected: Duplicate Replicate Matrix Spike/Matrix Spike Duplicate None

REMARKS:

TestAmerica

Dayton Division
3601 South Dixie Drive
Dayton Ohio 45439
Phone: 937-294-6856
Toll Free: 800-572-9839
Fax: 937-294-7816

Client Name: Burgess & Niple, Inc.

Address: 5085 Reed Road

City/State/Zip: Columbus, Ohio, 43220

Project Manager: Michael Atkins

Telephone Number: 614-459-2050

Fax No.: 614-451-1385

Sampler Name: (Print) Craig Botley

Sampler Signature: Craig C. Botley Jr.

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

State in which sampling occurred

Indiana Landfill

Yes

No

Compliance Monitoring?

Yes

No

Enforcement Action?

Yes

No

Report To:

Michael Atkins

Invoice To:

Michael Atkins

QUOTE NO.:

RUSH TAT (Pre-Schedule)

RUSH Due Date

Standard 7-10 Business Days

Email Results

Standard Level 2 QC

Electronic Deliverables

Yes

No

Analyze For:

Sample ID	Date Sampled	Time Sampled	No. of Containers Shipped	Composite	Field Filtered	HNO ₃	HCl - 40 mL Vial	NaOH	H ₂ SO ₄	H ₂ SO ₄	Other	Soil	WATER	VOCs 8260B	COD	Sodium	Chloride	Ammonia	Turb.	pH	Temp.	COND.	RUSH TAT (Pre-Schedule)	RUSH Due Date	Standard 7-10 Business Days	Email Results	Standard Level 2 QC <tr> </tr> <tr> </tr>	
GM-1	10/14/10	11:35AM	6	x		1	3	1	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
GM-2	10/14/10	12:25PM	6	x		1	3	1	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
GM-3	10/14/10	1:15PM	6	x		1	3	1	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
GM-4		1:15 PM	6	x		1	3	1	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
GM-Duplicate		-	6	x		1	3	1	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Equipment Blank		140PM	6	x		1	3	1	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Trip Blank	10/14/10	~	2	x		2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Special Instructions:

Laboratory Comments:

Temperature Upon Receipt:

1.0°C

NA

VOCs Free of Headspace?

N

Sample Containers Intact?

N

Relinquished by: Craig Botley Date: 10-15-10 Time Received by: 4:00pm
Relinquished by: Stephanie Johnson Date: Time Received by TestAmerica: 10/15/10 15:15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Cooler/Sample Receipt

<input type="checkbox"/> MSDS or Known Hazard Information Supplied by Client <input type="checkbox"/> Bottle stickers applied <input type="checkbox"/> ELEMENT comment entered <input type="checkbox"/> MSDS/COC scanned emailed to EH&S
<input type="checkbox"/> Discrepancies
<input type="checkbox"/> Short Hold
<input type="checkbox"/> Rush <input type="checkbox"/> 24hr <input type="checkbox"/> 2day <input type="checkbox"/> 3day <input type="checkbox"/> 5day <input type="checkbox"/> Other
Receipt evaluation performed by - Initials: <u>BS</u> Date: <u>10/18/10</u> Time: <u>(90)</u>

Client ID SURG

Work Order # DT-SCA-072

Method of Shipment:

- Walk-In Client
- TestAmerica Field/Courier
- Other Client/3rd Party Courier _____
- Fed Ex Tracking # _____
- UPS Tracking # _____
- DHL Tracking # _____
- Other _____

Are there any soil samples from areas requiring USDA quarantine? (AL, AR, AZ, CA, FL, GA, HI, ID, LA MS, NC, NM, NY, OK, SC, TN, TX, VA, Puerto Rico, Virgin Islands, any other Non-Domestic area)

No Yes (If Yes, Project Manager must be notified).

Shipping Container Type:

- Cooler
- Box
- None
- Other _____

Custody Seals Intact:

- Yes
- No
- N/A (not used or required)

Packing Materials:

- Plastic Bags
- Bubble Wrap
- Foam
- Paper
- Packing Peanuts
- Vermiculite
- None
- Other _____

Cooling Materials:

- Ice (solid)
- Ice (Melted)
- Blue Ice
- Dry Ice
- None
- Other _____

Receipt Temperatures

Thermometer ID M Observed (°C) 1.1 Corrected (°C) 1.0 Acceptable*
 Yes No
 Yes No
 Yes No

Direct

from Field

Check if Additional Sheets Required
 Cooler ID Note Affected Samples if temperature not acceptable

* Samples out of temperature, but received directly from the field with signs that the cooling process had started are considered acceptable.

Receipt Questions**	Y	N	n/a	"No" answers require additional comment
COC present & TA receipt signature, date, & time properly documented?	/			
Containers & labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	/			
Appropriate containers used & adequate volume provided?	/			
Correct preservation on the COC?	/			
Number of sample containers match COC?	/			
Samples received within hold time?	/			
Samples submitted for GRO and Volatiles analyses (8260, 624, 524) received without headspace?	/			
Was a Trip Blank received with VOA samples?	/			
Were the samples free of any questionable physical conformities? For example, field duplicates or multiple bottles of the same sample do not significantly vary in appearance (color, proportion of solids, etc.)	/			
Were the COC, bottle labels, and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	/			

** May not be applicable if samples are not for compliance testing

Client Contact Record

Contact via: Phone Email Other _____ Person Contacted: _____ Date/Time: _____

Discrepancy allowance agreement is on record in the client project file.

Discussion/Resolution:

Any additional documentation and clarification from client must be noted in the narrative and/or scanned into the COC directory.

Reviewed by PM Signature

Date

10/18/10

Page 1 of 1

WI No. DT-SCA-WI-001.8
 effective 04/12/10

ATTACHMENT 2
LABORATORY REPORT

November 05, 2010

Client:

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220

Work Order: DTJ0672
Project Name: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Attn: Michael Akins

Date Received: 10/15/10

Samples logged in at Dayton laboratory.

An executed copy of the Chain of Custody is also included as an addendum to this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at the number shown above.

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
GM-1	DTJ0672-01	10/14/10 11:35
GM-2	DTJ0672-02	10/14/10 12:25
GM-3	DTJ0672-03	10/14/10 14:15
GM-4	DTJ0672-04	10/14/10 13:15
GM-Duplicate	DTJ0672-05	10/14/10
Equipment Blank	DTJ0672-06	10/14/10 13:40
Trip Blank	DTJ0672-07	10/14/10

Ohio Certification Number: 4074, 857

Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our Laboratory.

Report Approved By:

This report has been electronically signed.

TestAmerica Dayton

Shelly A. Howard
Dayton Project Manager

Page 1 of 29

Burgess & Niple (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-01 (GM-1 - Water - NonPotable)									
Client Supplied Field Data									
pH	6.72		S.U.	0.10	1	11/05/10 08:57	PRB	10K0222	NA
Specific Conductance	793		µmhos/cm	10	1	11/05/10 08:57	PRB	10K0222	NA
Temperature	11.8		°C	0.100	1	11/05/10 08:57	PRB	10K0222	NA
Turbidity - Client Supplied	54.0		NTU	NA	1	11/05/10 08:57	PRB	10K0222	NA
General Chemistry Parameters									
Ammonia, Undistilled as N	0.666		mg/L	0.0500	1	10/21/10 10:02	KKH	10J0855	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	13.2		mg/L	10.0	1	10/20/10 17:48	AKM	10J0774	Hach 8000
Chloride	55.0		mg/L	10.0	10	11/03/10 13:24	RLM	10K0150	EPA 300.0
Total Metals									
Sodium	25.4		mg/L	1.00	1	10/22/10 14:27	MJW	10J0798	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	10/23/10 20:34	cap	10J1015	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	10/23/10 20:34	cap	10J1015	SW 8260B
Benzene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	10/23/10 20:34	cap	10J1015	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B

Burgess & Nipke (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-01 (GM-1 - Water - NonPotable) - cont.									
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	10/23/10 20:34	cap	10J1015	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	10/23/10 20:34	cap	10J1015	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	10/23/10 20:34	cap	10J1015	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	104 %					10/23/10 20:34	cap	10J1015	SW 8260B
Surr: Dibromoiodomethane (80-120%)	103 %					10/23/10 20:34	cap	10J1015	SW 8260B
Surr: Toluene-d8 (80-120%)	100 %					10/23/10 20:34	cap	10J1015	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	103 %					10/23/10 20:34	cap	10J1015	SW 8260B

Burgess & Niple (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-02 (GM-2 - Water - NonPotable)									
Client Supplied Field Data									
pH	6.79		S.U.	0.10	1	11/05/10 08:57	PRB	10K0222	NA
Specific Conductance	672		umbos/cm	10	1	11/05/10 08:57	PRB	10K0222	NA
Temperature	11.7		°C	0.100	1	11/05/10 08:57	PRB	10K0222	NA
Turbidity - Client Supplied	12.0		NTU	NA	1	11/05/10 08:57	PRB	10K0222	NA
General Chemistry Parameters									
Ammonia, Undistilled as N	1.09		mg/L	0.100	2	10/21/10 10:02	KKH	10J0855	EPA 350.1/SM18
Chemical Oxygen Demand	<10.0		mg/L	10.0	1	10/20/10 17:48	AKM	10J0774	4500 NH3 Hach 8000
Chloride	8.35		mg/L	1.00	1	11/04/10 03:08	RLM	10K0150	EPA 300.0
Total Metals									
Sodium	8.64		mg/L	1.00	1	10/22/10 14:30	MJW	10J0798	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	10/23/10 21:02	cap	10J1015	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	10/23/10 21:02	cap	10J1015	SW 8260B
Benzene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Bromodichloromethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
(Dichlorobromomethane)									
Bromoform	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	10/23/10 21:02	cap	10J1015	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Dibromochloromethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
(Chlorodibromomethane)									
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,2-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-02 (GM-2 - Water - NonPotable) - cont.									
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	10/23/10 21:02	cap	10J1015	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	10/23/10 21:02	cap	10J1015	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	10/23/10 21:02	cap	10J1015	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	103 %					10/23/10 21:02	cap	10J1015	SW 8260B
Surr: Dibromofluoromethane (80-120%)	102 %					10/23/10 21:02	cap	10J1015	SW 8260B
Surr: Toluene-d8 (80-120%)	99 %					10/23/10 21:02	cap	10J1015	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	105 %					10/23/10 21:02	cap	10J1015	SW 8260B

Burgess & Nipke (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-03 (GM-3 - Water - NonPotable)									
Client Supplied Field Data									
pH	7.29		S.U.	0.10	1	11/05/10 08:57	PRB	10K0222	NA
Specific Conductance	547		umhos/cm	10	1	11/05/10 08:57	PRB	10K0222	NA
Temperature	15.6		°C	0.100	1	11/05/10 08:57	PRB	10K0222	NA
Turbidity - Client Supplied	592		NTU	NA	1	11/05/10 08:57	PRB	10K0222	NA
General Chemistry Parameters									
Ammonia, Undistilled as N	0.489		mg/L	0.0500	1	10/21/10 10:02	KKH	10J0855	EPA 350.1/SM18 4500 NH3 Hach 8000
Chemical Oxygen Demand	23.0		mg/L	10.0	1	10/20/10 17:48	AKM	10J0774	Hach 8000
Chloride	18.0		mg/L	10.0	10	11/03/10 15:07	RLM	10K0150	EPA 300.0
Total Metals									
Sodium	19.1		mg/L	1.00	1	10/22/10 14:33	MJW	10J0798	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	10/23/10 21:29	cap	10J1015	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	10/23/10 21:29	cap	10J1015	SW 8260B
Benzene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	10/23/10 21:29	cap	10J1015	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
cis-1,2-Dichloroethene	14.1		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,2-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B

Burgess & Nipke (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-03 (GM-3 - Water - NonPotable) - cont.									
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	10/23/10 21:29	cap	10J1015	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	10/23/10 21:29	cap	10J1015	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Vinyl chloride	12.6		ug/L	1.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	10/23/10 21:29	cap	10J1015	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	103 %					10/23/10 21:29	cap	10J1015	SW 8260B
Surr: Dibromoiodomethane (80-120%)	102 %					10/23/10 21:29	cap	10J1015	SW 8260B
Surr: Toluene-d8 (80-120%)	101 %					10/23/10 21:29	cap	10J1015	SW 8260B
Surr: 4-Bromoiodobenzene (80-120%)	101 %					10/23/10 21:29	cap	10J1015	SW 8260B

Burgess & Nipke (Landfill)

5085 Reed Rd.

Columbus, OH 43220

Michael Akins

Work Order: DTJ0672

Project: Wayne Reclamation & Recycling (Indiana)

Project Number: Columbia City

Received: 10/15/10

Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-04 (GM-4 - Water - NonPotable)									
Client Supplied Field Data									
pH	6.84		S.U.	0.10	1	11/05/10 08:57	PRB	10K0222	NA
Specific Conductance	686		µmhos/cm	10	1	11/05/10 08:57	PRB	10K0222	NA
Temperature	12.8		°C	0.100	1	11/05/10 08:57	PRB	10K0222	NA
Turbidity - Client Supplied	92.0		NTU	NA	1	11/05/10 08:57	PRB	10K0222	NA
General Chemistry Parameters									
Ammonia, Undistilled as N	0.269		mg/L	0.0500	1	10/21/10 10:02	KKH	10J0855	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	16.0		mg/L	10.0	1	10/20/10 17:48	AKM	10J0774	Hach 8000
Chloride	2.00		mg/L	1.00	1	11/04/10 04:17	RLM	10K0150	EPA 300.0
Total Metals									
Sodium	7.31		mg/L	1.00	1	10/22/10 14:35	MJW	10J0798	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Benzene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,1-Dichloroethane	14.9		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
cis-1,2-Dichloroethene	122		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
trans-1,2-Dichloroethene	8.05		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,1-Dichloroethene	2.61		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-04 (GM-4 - Water - NonPotable) - cont.									
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,1,1-Trichloroethane	171	P10, P11, H,M	ug/L	10.0	10	10/28/10 17:20	jmt	10J1263	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Trichloroethene	858	P10, P11, H,M	ug/L	10.0	10	10/28/10 17:20	jmt	10J1263	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Vinyl chloride	37.4		ug/L	1.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	10/28/10 13:51	jmt	10J1270	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	108 %	P10, P11, H				10/28/10 17:20	jmt	10J1263	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	94 %					10/28/10 13:51	jmt	10J1270	SW 8260B
Surr: Dibromofluoromethane (80-120%)	104 %	P10, P11, H				10/28/10 17:20	jmt	10J1263	SW 8260B
Surr: Dibromofluoromethane (80-120%)	95 %					10/28/10 13:51	jmt	10J1270	SW 8260B
Surr: Toluene-d8 (80-120%)	103 %	P10, P11, H				10/28/10 17:20	jmt	10J1263	SW 8260B
Surr: Toluene-d8 (80-120%)	101 %					10/28/10 13:51	jmt	10J1270	SW 8260B
Surr: 4-Bromoefluorobenzene (80-120%)	98 %	P10, P11, H				10/28/10 17:20	jmt	10J1263	SW 8260B
Surr: 4-Bromoefluorobenzene (80-120%)	100 %					10/28/10 13:51	jmt	10J1270	SW 8260B

Burgess & Niple (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-05 (GM-Duplicate - Water - NonPotable)									
General Chemistry Parameters									
Ammonia, Undistilled as N	0.286		mg/L	0.0500	1	10/21/10 10:02	KKH	10J0855	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	20.2		mg/L	10.0	1	10/20/10 17:48	AKM	10J0774	Hach 8000
Chloride	2.04		mg/L	1.00	1	11/04/10 04:34	RLM	10K0150	EPA 300.0
Total Metals									
Sodium	7.35		mg/L	1.00	1	10/22/10 14:38	MJW	10J0798	SW 6010B
Volatile Organic Compounds by GC/MS									
Aacetone	<20.0		ug/L	20.0	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Benzene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,1-Dichloroethane	18.9		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
cis-1,2-Dichloroethene	147		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
trans-1,2-Dichloroethene	9.58		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,1-Dichloroethene	3.10		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Ethylbenzene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-05 (GM-Duplicate - Water - NonPotable) - cont.									
Volatile Organic Compounds by GC/MS - cont.									
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Tetrachloroethylene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,1,1-Trichloroethane	156		ug/L	10.0	10	10/28/10 16:52	jmt	10J1263	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Trichloroethylene	778		ug/L	10.0	10	10/28/10 16:52	jmt	10J1263	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Vinyl chloride	43.0		ug/L	1.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	10/28/10 17:47	jmt	10J1263	SW 8260B
<i>Surr: 1,2-Dichloroethane-d4 (80-120%)</i>	<i>110 %</i>					10/28/10 17:47	jmt	10J1263	SW 8260B
<i>Surr: Dibromofluoromethane (80-120%)</i>	<i>102 %</i>					10/28/10 17:47	jmt	10J1263	SW 8260B
<i>Surr: Toluene-d8 (80-120%)</i>	<i>103 %</i>					10/28/10 17:47	jmt	10J1263	SW 8260B
<i>Surr: 4-Bromofluorobenzene (80-120%)</i>	<i>100 %</i>					10/28/10 17:47	jmt	10J1263	SW 8260B

Burgess & Nipke (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method						
Sample ID: DTJ0672-06 (Equipment Blank - Water - NonPotable)				Sampled: 10/14/10 13:40		Recvd: 10/15/10 18:15									
General Chemistry Parameters															
Ammonia, Undistilled as N	0.0720		mg/L	0.0500	1	10/21/10 10:02	KKH	10J0855	EPA 350.1/SM18 4500 NH3 H						
Chemical Oxygen Demand	<10.0		mg/L	10.0	1	10/20/10 17:48	AKM	10J0774	Hach 8000						
Chloride	<1.00		mg/L	1.00	1	11/03/10 15:59	RLM	10K0150	EPA 300.0						
Total Metals															
Sodium	<1.00		mg/L	1.00	1	10/22/10 18:16	MJW	10J0798	SW 6010B						
Volatile Organic Compounds by GC/MS															
Acetone	<20.0		ug/L	20.0	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Acrylonitrile	<50.0		ug/L	50.0	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Benzene	1.11		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Bromochloromethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Bromoform	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
2-Butanone (MEK)	<12.5		ug/L	12.5	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Carbon disulfide	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Carbon tetrachloride	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Chlorobenzene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Chloroethane	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Chloroform	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Dibromomethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,1-Dichloroethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,1-Dichloroethene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
1,2-Dichloropropane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Ethylbenzene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
2-Hexanone	<10.0		ug/L	10.0	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Iodomethane	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						
Methylene chloride	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B						

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-06 (Equipment Blank - Water - NonPotable) - cont.									
Volatile Organic Compounds by GC/MS - cont.									
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Toluene	4.31		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
Xylenes, Total	2.36		ug/L	2.00	1	10/27/10 18:39	jmt	10J1199	SW 8260B
<i>Surr: 1,2-Dichloroethane-d4 (80-120%)</i>	93 %					10/27/10 18:39	jmt	10J1199	SW 8260B
<i>Surr: Dibromoiodomethane (80-120%)</i>	90 %					10/27/10 18:39	jmt	10J1199	SW 8260B
<i>Surr: Toluene-d8 (80-120%)</i>	100 %					10/27/10 18:39	jmt	10J1199	SW 8260B
<i>Surr: 4-Bromoiodobenzene (80-120%)</i>	100 %					10/27/10 18:39	jmt	10J1199	SW 8260B

Burgess & Nipke (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-07 (Trip Blank - Water - NonPotable)									
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Benzene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Ethylbenzene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/Batch	Method
Sample ID: DTJ0672-07 (Trip Blank - Water - NonPotable) - cont.									
Volatile Organic Compounds by GC/MS - cont.									
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	10/27/10 02:26	jmt	10J1118	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	105 %					10/27/10 02:26	jmt	10J1118	SW 8260B
Surr: Dibromoformmethane (80-120%)	101 %					10/27/10 02:26	jmt	10J1118	SW 8260B
Surr: Toluene-d8 (80-120%)	101 %					10/27/10 02:26	jmt	10J1118	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	101 %					10/27/10 02:26	jmt	10J1118	SW 8260B

Burgess & Nipke (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup Result	% REC Limits	RPD Limit	Q
General Chemistry Parameters												
Chemical Oxygen Demand	10J0774			mg/L	N/A	10.0	<10.0					
Ammonia, Undistilled as N	10J0855			mg/L	N/A	0.0500	<0.0500					
Chloride	10K0150			mg/L	N/A	1.00	<1.00					
Total Metals												
Sodium	10J0798			mg/L	N/A	1.00	<1.00					
Volatile Organic Compounds by GC/MS												
Benzene	10J1015			ug/L	N/A	1.00	<1.00					
Bromodichloromethane (Dichlorobromomethane)	10J1015			ug/L	N/A	1.00	<1.00					
Bromoform	10J1015			ug/L	N/A	1.00	<1.00					
Bromomethane (Methyl bromido)	10J1015			ug/L	N/A	5.00	<5.00					
Carbon tetrachloride	10J1015			ug/L	N/A	1.00	<1.00					
Chlorobenzene	10J1015			ug/L	N/A	1.00	<1.00					
Chloroethane	10J1015			ug/L	N/A	5.00	<5.00					
2-Chloroethylvinyl ether	10J1015			ug/L	N/A	5.00	<5.00					
Chloroform	10J1015			ug/L	N/A	1.00	<1.00					
Chloromethane (Methyl chloride)	10J1015			ug/L	N/A	5.00	<5.00					
Dibromochloromethane (Chlorodibromomethane)	10J1015			ug/L	N/A	1.00	<1.00					
1,2-Dichlorobenzene	10J1015			ug/L	N/A	1.00	<1.00					
1,4-Dichlorobenzene	10J1015			ug/L	N/A	1.00	<1.00					
1,3-Dichlorobenzene	10J1015			ug/L	N/A	1.00	<1.00					
1,1-Dichloroethane	10J1015			ug/L	N/A	1.00	<1.00					
1,2-Dichloroethane	10J1015			ug/L	N/A	1.00	<1.00					
trans-1,2-Dichloroethene	10J1015			ug/L	N/A	1.00	<1.00					
1,1-Dichloroethene	10J1015			ug/L	N/A	1.00	<1.00					
1,2-Dichloropropane	10J1015			ug/L	N/A	1.00	<1.00					
cis-1,3-Dichloropropene	10J1015			ug/L	N/A	1.00	<1.00					
trans-1,3-Dichloropropene	10J1015			ug/L	N/A	1.00	<1.00					
Ethylbenzene	10J1015			ug/L	N/A	1.00	<1.00					
n-Hexane	10J1015			ug/L	N/A	5.00	<5.00					
Methylene chloride	10J1015			ug/L	N/A	5.00	<5.00					
1,1,2,2-Tetrachloroethane	10J1015			ug/L	N/A	1.00	<1.00					
Tetrachloroethene	10J1015			ug/L	N/A	1.00	<1.00					
Toluene	10J1015			ug/L	N/A	1.00	<1.00					
1,1,1-Trichloroethane	10J1015			ug/L	N/A	1.00	<1.00					
1,1,2-Trichloroethane	10J1015			ug/L	N/A	1.00	<1.00					
Trichloroethene	10J1015			ug/L	N/A	1.00	<1.00					
Trichlorofluoromethane	10J1015			ug/L	N/A	1.00	<1.00					
Vinyl chloride	10J1015			ug/L	N/A	1.00	<1.00					

Burgess & Niple (Landfill)
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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
Benzene	10J1118			ug/L	N/A	1.00	<1.00							
Bromodichloromethane (Dichlorobromomethane)	10J1118			ug/L	N/A	1.00	<1.00							
Bromoform	10J1118			ug/L	N/A	1.00	<1.00							
Bromomethane (Methyl bromide)	10J1118			ug/L	N/A	5.00	<5.00							
Carbon tetrachloride	10J1118			ug/L	N/A	1.00	<1.00							
Chlorobenzene	10J1118			ug/L	N/A	1.00	<1.00							
Chloroethane	10J1118			ug/L	N/A	5.00	<5.00							
2-Chloroethylvinyl ether	10J1118			ug/L	N/A	5.00	<5.00							
Chloroform	10J1118			ug/L	N/A	1.00	<1.00							
Chloromethane (Methyl chloride)	10J1118			ug/L	N/A	5.00	<5.00							
Dibromochloromethane (Chlorodibromomethane)	10J1118			ug/L	N/A	1.00	<1.00							
1,2-Dichlorobenzene	10J1118			ug/L	N/A	1.00	<1.00							
1,4-Dichlorobenzene	10J1118			ug/L	N/A	1.00	<1.00							
1,3-Dichlorobenzene	10J1118			ug/L	N/A	1.00	<1.00							
1,1-Dichloroethane	10J1118			ug/L	N/A	1.00	<1.00							
1,2-Dichloroethane	10J1118			ug/L	N/A	1.00	<1.00							
trans-1,2-Dichloroethylene	10J1118			ug/L	N/A	1.00	<1.00							
1,1-Dichloroethene	10J1118			ug/L	N/A	1.00	<1.00							
1,2-Dichloropropane	10J1118			ug/L	N/A	1.00	<1.00							
cis-1,3-Dichloropropene	10J1118			ug/L	N/A	1.00	<1.00							
trans-1,3-Dichloropropene	10J1118			ug/L	N/A	1.00	<1.00							
Ethylbenzene	10J1118			ug/L	N/A	1.00	<1.00							
n-Hexane	10J1118			ug/L	N/A	5.00	<5.00							
Methylene chloride	10J1118			ug/L	N/A	5.00	<5.00							
1,1,2,2-Tetrachloroethane	10J1118			ug/L	N/A	1.00	<1.00							
Tetrachloroethylene	10J1118			ug/L	N/A	1.00	<1.00							
Toluene	10J1118			ug/L	N/A	1.00	<1.00							
1,1,1-Trichloroethane	10J1118			ug/L	N/A	1.00	<1.00							
1,1,2-Trichloroethane	10J1118			ug/L	N/A	1.00	<1.00							
Trichloroethylene	10J1118			ug/L	N/A	1.00	<1.00							
Trichlorofluoromethane	10J1118			ug/L	N/A	1.00	<1.00							
Vinyl chloride	10J1118			ug/L	N/A	1.00	<1.00							
Benzene	10J1199			ug/L	N/A	1.00	<1.00							
Bromodichloromethane (Dichlorobromomethane)	10J1199			ug/L	N/A	1.00	<1.00							
Bromoform	10J1199			ug/L	N/A	1.00	<1.00							
Bromomethane (Methyl bromide)	10J1199			ug/L	N/A	5.00	<5.00							
Carbon tetrachloride	10J1199			ug/L	N/A	1.00	<1.00							
Chlorobenzene	10J1199			ug/L	N/A	1.00	<1.00							
Chloroethane	10J1199			ug/L	N/A	5.00	<5.00							
2-Chloroethylvinyl ether	10J1199			ug/L	N/A	5.00	<5.00							
Chloroform	10J1199			ug/L	N/A	1.00	<1.00							
Chloromethane (Methyl chloride)	10J1199			ug/L	N/A	5.00	<5.00							
Dibromochloromethane (Chlorodibromomethane)	10J1199			ug/L	N/A	1.00	<1.00							
1,2-Dichlorobenzene	10J1199			ug/L	N/A	1.00	<1.00							

Burgess & Niple (Landfill)

5085 Reed Rd.

Columbus, OH 43220

Michael Akins

Work Order: DTJ0672

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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS													
1,4-Dichlorobenzene	10J1199			ug/L	N/A	1.00	<1.00						
1,3-Dichlorobenzene	10J1199			ug/L	N/A	1.00	<1.00						
1,1-Dichloroethane	10J1199			ug/L	N/A	1.00	<1.00						
1,2-Dichloroethane	10J1199			ug/L	N/A	1.00	<1.00						
trans-1,2-Dichloroethylene	10J1199			ug/L	N/A	1.00	<1.00						
1,1-Dichloroethene	10J1199			ug/L	N/A	1.00	<1.00						
1,2-Dichloropropane	10J1199			ug/L	N/A	1.00	<1.00						
cis-1,3-Dichloropropene	10J1199			ug/L	N/A	1.00	<1.00						
trans-1,3-Dichloropropene	10J1199			ug/L	N/A	1.00	<1.00						
Ethylbenzene	10J1199			ug/L	N/A	1.00	<1.00						
n-Hexane	10J1199			ug/L	N/A	5.00	<5.00						
Methylene chloride	10J1199			ug/L	N/A	5.00	<5.00						
1,1,2,2-Tetrachloroethane	10J1199			ug/L	N/A	1.00	<1.00						
Tetrachloroethene	10J1199			ug/L	N/A	1.00	<1.00						
Toluene	10J1199			ug/L	N/A	1.00	<1.00						
1,1,1-Trichloroethane	10J1199			ug/L	N/A	1.00	<1.00						
1,1,2-Trichloroethane	10J1199			ug/L	N/A	1.00	<1.00						
Trichloroethene	10J1199			ug/L	N/A	1.00	<1.00						
Trichlorofluoromethane	10J1199			ug/L	N/A	1.00	<1.00						
Vinyl chloride	10J1199			ug/L	N/A	1.00	<1.00						
Benzene	10J1263			ug/L	N/A	1.00	<1.00						
Bromodichloromethane (Dichlorobromomethane)	10J1263			ug/L	N/A	1.00	<1.00						
Bromoform	10J1263			ug/L	N/A	1.00	<1.00						
Bromomethane (Methyl bromide)	10J1263			ug/L	N/A	5.00	<5.00						
Carbon tetrachloride	10J1263			ug/L	N/A	1.00	<1.00						
Chlorobenzene	10J1263			ug/L	N/A	1.00	<1.00						
Chloroethane	10J1263			ug/L	N/A	5.00	<5.00						
2-Chloroethylvinyl ether	10J1263			ug/L	N/A	5.00	<5.00						
Chloroform	10J1263			ug/L	N/A	1.00	<1.00						
Chloromethane (Methyl chloride)	10J1263			ug/L	N/A	5.00	<5.00						
Dibromochloromethane (Chlorodibromomethane)	10J1263			ug/L	N/A	1.00	<1.00						
1,2-Dichlorobenzene	10J1263			ug/L	N/A	1.00	<1.00						
1,4-Dichlorobenzene	10J1263			ug/L	N/A	1.00	<1.00						
1,3-Dichlorobenzene	10J1263			ug/L	N/A	1.00	<1.00						
1,1-Dichloroethane	10J1263			ug/L	N/A	1.00	<1.00						
1,2-Dichloroethane	10J1263			ug/L	N/A	1.00	<1.00						
trans-1,2-Dichloroethylene	10J1263			ug/L	N/A	1.00	<1.00						
1,1-Dichloroethene	10J1263			ug/L	N/A	1.00	<1.00						
1,2-Dichloropropane	10J1263			ug/L	N/A	1.00	<1.00						
cis-1,3-Dichloropropene	10J1263			ug/L	N/A	1.00	<1.00						
trans-1,3-Dichloropropene	10J1263			ug/L	N/A	1.00	<1.00						
Ethylbenzene	10J1263			ug/L	N/A	1.00	<1.00						
n-Hexane	10J1263			ug/L	N/A	5.00	<5.00						
Methylene chloride	10J1263			ug/L	N/A	5.00	<5.00						

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DTJ0672
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: Columbia City

Received: 10/15/10
Reported: 11/05/10 15:21

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup Result	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS													
1,1,2,2-Tetrachloroethane	10J1263			ug/L	N/A	1.00	<1.00						
Tetrachloroethene	10J1263			ug/L	N/A	1.00	<1.00						
Toluene	10J1263			ug/L	N/A	1.00	<1.00						
1,1,1-Trichloroethane	10J1263			ug/L	N/A	1.00	<1.00						
1,1,2-Trichloroethane	10J1263			ug/L	N/A	1.00	<1.00						
Trichloroethene	10J1263			ug/L	N/A	1.00	<1.00						
Trichlorofluoromethane	10J1263			ug/L	N/A	1.00	<1.00						
Vinyl chloride	10J1263			ug/L	N/A	1.00	<1.00						
Benzene	10J1270			ug/L	N/A	1.00	<1.00						
Bromodichloromethane (Dichlorobromomethane)	10J1270			ug/L	N/A	1.00	<1.00						
Bromoform	10J1270			ug/L	N/A	1.00	<1.00						
Bromomethane (Methyl bromide)	10J1270			ug/L	N/A	5.00	<5.00						
Carbon tetrachloride	10J1270			ug/L	N/A	1.00	<1.00						
Chlorobenzene	10J1270			ug/L	N/A	1.00	<1.00						
Chloroethane	10J1270			ug/L	N/A	5.00	<5.00						
2-Chloroethylvinyl ether	10J1270			ug/L	N/A	5.00	<5.00						
Chloroform	10J1270			ug/L	N/A	1.00	<1.00						
Chloromethane (Methyl chloride)	10J1270			ug/L	N/A	5.00	<5.00						
Dibromochloromethane (Chlorodibromomethane)	10J1270			ug/L	N/A	1.00	<1.00						
1,2-Dichlorobenzene	10J1270			ug/L	N/A	1.00	<1.00						
1,4-Dichlorobenzene	10J1270			ug/L	N/A	1.00	<1.00						
1,3-Dichlorobenzene	10J1270			ug/L	N/A	1.00	<1.00						
1,1-Dichloroethane	10J1270			ug/L	N/A	1.00	<1.00						
1,2-Dichloroethane	10J1270			ug/L	N/A	1.00	<1.00						
trans-1,2-Dichloroethene	10J1270			ug/L	N/A	1.00	<1.00						
1,1-Dichloroethene	10J1270			ug/L	N/A	1.00	<1.00						
1,2-Dichloropropane	10J1270			ug/L	N/A	1.00	<1.00						
cis-1,3-Dichluropropene	10J1270			ug/L	N/A	1.00	<1.00						
trans-1,3-Dichluropropene	10J1270			ug/L	N/A	1.00	<1.00						
Ethylbenzene	10J1270			ug/L	N/A	1.00	<1.00						
n-Hexane	10J1270			ug/L	N/A	5.00	<5.00						
Methylene chloride	10J1270			ug/L	N/A	5.00	<5.00						
1,1,2,2-Tetrachloroethane	10J1270			ug/L	N/A	1.00	<1.00						
Tetrachloroethene	10J1270			ug/L	N/A	1.00	<1.00						
Toluene	10J1270			ug/L	N/A	1.00	<1.00						
1,1,1-Trichloroethane	10J1270			ug/L	N/A	1.00	<1.00						
1,1,2-Trichloroethane	10J1270			ug/L	N/A	1.00	<1.00						
Trichloroethene	10J1270			ug/L	N/A	1.00	<1.00						
Trichlorofluoromethane	10J1270			ug/L	N/A	1.00	<1.00						
Vinyl chloride	10J1270			ug/L	N/A	1.00	<1.00						

Burgess & Niple (Landfill)
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Michael Akins

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Received: 10/15/10
Reported: 11/05/10 15:21

LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters													
QC Source Sample: DTJ0631-01													
Chemical Oxygen Demand	10J0774	19.8		mg/L	N/A	10.0	14.2				33	200	
QC Source Sample: DTJ0601-05													
Ammonia, Undistilled as N	10J0855	1.83		mg/L	N/A	0.500	2.09				13	20	
QC Source Sample: DTJ0672-01													
Chloride	10K0150	55.0		mg/L	N/A	10.0	55.4				1	20	

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Chemical Oxygen Demand	10J0774		30.0	mg/L	N/A	10.0	30.0		100		90-110			
Ammonia, Undistilled as N	10J0855		0.500	mg/L	N/A	0.0500	0.510		102		90-110			
Chloride	10K0150		20.0	mg/L	N/A	1.00	19.5		98		90-110			
Total Metals														
Sodium	10J0798		21.0	mg/L	N/A	1.00	23.5		112		80-120			
Volatile Organic Compounds by GC/MS														
Benzene	10J1015		20.0	ug/L	N/A	1.00	19.8		99		79-120			
Bromodichloromethane (Dichlorobromomethane)	10J1015		20.0	ug/L	N/A	1.00	19.4		97		76-121			
Bromoform	10J1015		20.0	ug/L	N/A	1.00	18.6		93		69-120			
Bromomethane (Methyl bromide)	10J1015		20.0	ug/L	N/A	5.00	18.2		91		64-120			
Carbon tetrachloride	10J1015		20.0	ug/L	N/A	1.00	19.3		97		70-129			
Chlorobenzene	10J1015		20.0	ug/L	N/A	1.00	18.8		94		78-120			
Chloroethane	10J1015		20.0	ug/L	N/A	5.00	20.3		101		67-120			
2-Chloroethylvinyl ether	10J1015		20.0	ug/L	N/A	5.00	17.7		88		10-212			
Chloroform	10J1015		20.0	ug/L	N/A	1.00	19.0		95		77-120			
Chloromethane (Methyl chloride)	10J1015		20.0	ug/L	N/A	5.00	18.3		91		58-120			
Dibromochloromethane (Chlorodibromomethane)	10J1015		20.0	ug/L	N/A	1.00	18.0		90		76-123			
1,2-Dichlorobenzene	10J1015		20.0	ug/L	N/A	1.00	18.4		92		78-123			
1,4-Dichlorobenzene	10J1015		20.0	ug/L	N/A	1.00	19.3		96		74-120			
1,3-Dichlorobenzene	10J1015		20.0	ug/L	N/A	1.00	19.2		96		76-121			
1,1-Dichloroethane	10J1015		20.0	ug/L	N/A	1.00	16.7		84		79-120			
1,2-Dichloroethane	10J1015		20.0	ug/L	N/A	1.00	19.4		97		75-120			
trans-1,2-Dichloroethene	10J1015		20.0	ug/L	N/A	1.00	20.0		100		79-120			
1,1-Dichloroethene	10J1015		20.0	ug/L	N/A	1.00	19.4		97		71-121			
1,2-Dichloropropane	10J1015		20.0	ug/L	N/A	1.00	19.3		96		80-120			
cis-1,3-Dichloropropene	10J1015		20.0	ug/L	N/A	1.00	20.0		100		80-120			
trans-1,3-Dichloropropene	10J1015		20.0	ug/L	N/A	1.00	18.6		93		74-120			
Ethylbenzene	10J1015		20.0	ug/L	N/A	1.00	19.7		98		79-120			
n-Hexane	10J1015		20.0	ug/L	N/A	5.00	36.2		181		57-180			L1
Methylene chloride	10J1015		20.0	ug/L	N/A	5.00	23.8		119		76-120			
1,1,2-Tetrachloroethane	10J1015		20.0	ug/L	N/A	1.00	18.7		94		74-120			
Tetrachloroethene	10J1015		20.0	ug/L	N/A	1.00	20.8		104		62-128			
Toluene	10J1015		20.0	ug/L	N/A	1.00	19.8		99		79-120			
1,1,1-Trichloroethane	10J1015		20.0	ug/L	N/A	1.00	19.6		98		74-121			
1,1,2-Trichloroethane	10J1015		20.0	ug/L	N/A	1.00	18.5		93		75-120			
Trichloroethene	10J1015		20.0	ug/L	N/A	1.00	19.6		98		77-120			
Trichlorofluoromethane	10J1015		20.0	ug/L	N/A	1.00	20.5		103		71-136			
Vinyl chloride	10J1015		20.0	ug/L	N/A	1.00	18.9		94		65-126			

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup Result	% REC Limits	RPD RPD	Limit	Q
Volatile Organic Compounds by GC/MS													
Benzene	10J1118		20.0	ug/L	N/A	1.00	19.2	96		79-120			
Bromodichloromethane (Dichlorobromomethane)	10J1118		20.0	ug/L	N/A	1.00	19.2	96		76-121			
Bromoform	10J1118		20.0	ug/L	N/A	1.00	19.0	95		69-120			
Bromomethane (Methyl bromide)	10J1118		20.0	ug/L	N/A	5.00	18.7	93		64-120			
Carbon tetrachloride	10J1118		20.0	ug/L	N/A	1.00	19.6	98		70-129			
Chlorobenzene	10J1118		20.0	ug/L	N/A	1.00	19.6	98		78-120			
Chloroethane	10J1118		20.0	ug/L	N/A	5.00	18.1	91		67-120			
2-Chloroethylvinyl ether	10J1118		20.0	ug/L	N/A	5.00	19.0	95		10-212			
Chloroform	10J1118		20.0	ug/L	N/A	1.00	18.6	93		77-120			
Chloromethane (Methyl chloride)	10J1118		20.0	ug/L	N/A	5.00	17.2	86		58-120			
Dibromochloromethane (Chlorodibromomethane)	10J1118		20.0	ug/L	N/A	1.00	19.1	95		76-123			
1,2-Dichlorobenzene	10J1118		20.0	ug/L	N/A	1.00	19.8	99		78-123			
1,4-Dichlorobenzene	10J1118		20.0	ug/L	N/A	1.00	19.2	96		74-120			
1,3-Dichlorobenzene	10J1118		20.0	ug/L	N/A	1.00	19.4	97		76-121			
1,1-Dichloroethane	10J1118		20.0	ug/L	N/A	1.00	20.7	104		79-120			
1,2-Dichloroethane	10J1118		20.0	ug/L	N/A	1.00	19.1	95		75-120			
trans-1,2-Dichloroethylene	10J1118		20.0	ug/L	N/A	1.00	18.3	92		79-120			
1,1-Dichloroethene	10J1118		20.0	ug/L	N/A	1.00	17.4	87		71-121			
1,2-Dichloropropane	10J1118		20.0	ug/L	N/A	1.00	19.3	96		80-120			
cis-1,3-Dichloropropene	10J1118		20.0	ug/L	N/A	1.00	19.4	97		80-120			
trans-1,3-Dichloropropene	10J1118		20.0	ug/L	N/A	1.00	19.8	99		74-120			
Ethylbenzene	10J1118		20.0	ug/L	N/A	1.00	20.1	101		79-120			
n-Hexane	10J1118		20.0	ug/L	N/A	5.00	26.9	135		57-180			
Methylene chloride	10J1118		20.0	ug/L	N/A	5.00	19.9	100		76-120			
1,1,2,2-Tetrachloroethane	10J1118		20.0	ug/L	N/A	1.00	19.8	99		74-120			
Tetrachloroethene	10J1118		20.0	ug/L	N/A	1.00	18.5	93		62-128			
Toluene	10J1118		20.0	ug/L	N/A	1.00	19.7	98		79-120			
1,1,1-Trichloroethane	10J1118		20.0	ug/L	N/A	1.00	20.5	102		74-121			
1,1,2-Trichloroethane	10J1118		20.0	ug/L	N/A	1.00	19.0	95		75-120			
Trichloroethene	10J1118		20.0	ug/L	N/A	1.00	18.8	94		77-120			
Trichlorofluoromethane	10J1118		20.0	ug/L	N/A	1.00	19.3	97		71-136			
Vinyl chloride	10J1118		20.0	ug/L	N/A	1.00	18.2	91		65-126			
Benzene	10J1199		20.0	ug/L	N/A	1.00	19.1	95		79-120			
Bromodichloromethane (Dichlorobromosmethane)	10J1199		20.0	ug/L	N/A	1.00	19.5	97		76-121			
Bromoform	10J1199		20.0	ug/L	N/A	1.00	20.2	101		69-120			
Bromomethane (Methyl bromide)	10J1199		20.0	ug/L	N/A	5.00	17.5	87		64-120			
Carbon tetrachloride	10J1199		20.0	ug/L	N/A	1.00	19.4	97		70-129			
Chlorobenzene	10J1199		20.0	ug/L	N/A	1.00	20.1	100		78-120			
Chloroethane	10J1199		20.0	ug/L	N/A	5.00	18.1	91		67-120			
2-Chloroethylvinyl ether	10J1199		20.0	ug/L	N/A	5.00	20.5	103		10-212			
Chloroform	10J1199		20.0	ug/L	N/A	1.00	18.3	91		77-120			
Chloromethane (Methyl chloride)	10J1199		20.0	ug/L	N/A	5.00	18.0	90		58-120			
Dibromochloromethane (Chlorodibromomethane)	10J1199		20.0	ug/L	N/A	1.00	20.1	100		76-123			
1,2-Dichlorobenzene	10J1199		20.0	ug/L	N/A	1.00	22.0	110		78-123			

Burgess & Niple (Landfill)

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS													
1,4-Dichlorobenzene	10J1199	20.0	ug/L	N/A	1.00	21.1	106			74-120			
1,3-Dichlorobenzene	10J1199	20.0	ug/L	N/A	1.00	21.4	107			76-121			
1,1-Dichloroethane	10J1199	20.0	ug/L	N/A	1.00	18.3	92			79-120			
1,2-Dichloroethane	10J1199	20.0	ug/L	N/A	1.00	19.0	95			75-120			
trans-1,2-Dichloroethylene	10J1199	20.0	ug/L	N/A	1.00	17.9	90			79-120			
1,1-Dichloroethene	10J1199	20.0	ug/L	N/A	1.00	16.8	84			71-121			
1,2-Dichloropropane	10J1199	20.0	ug/L	N/A	1.00	19.0	95			80-120			
cis-1,3-Dichloropropene	10J1199	20.0	ug/L	N/A	1.00	20.0	100			80-120			
trans-1,3-Dichloropropene	10J1199	20.0	ug/L	N/A	1.00	20.7	104			74-120			
Ethylbenzene	10J1199	20.0	ug/L	N/A	1.00	20.2	101			79-120			
n-Hexane	10J1199	20.0	ug/L	N/A	5.00	20.3	102			57-180			
Methylene chloride	10J1199	20.0	ug/L	N/A	5.00	17.9	89			76-120			
1,1,2,2-Tetrachloroethane	10J1199	20.0	ug/L	N/A	1.00	23.0	115			74-120			
Tetrachloroethylene	10J1199	20.0	ug/L	N/A	1.00	18.8	94			62-128			
Toluene	10J1199	20.0	ug/L	N/A	1.00	19.6	98			79-120			
1,1,1-Trichloroethane	10J1199	20.0	ug/L	N/A	1.00	19.8	99			74-121			
1,1,2-Trichloroethane	10J1199	20.0	ug/L	N/A	1.00	20.5	103			75-120			
Trichloroethylene	10J1199	20.0	ug/L	N/A	1.00	18.9	94			77-120			
Trichlorofluoromethane	10J1199	20.0	ug/L	N/A	1.00	18.5	93			71-136			
Vinyl chloride	10J1199	20.0	ug/L	N/A	1.00	17.6	88			65-126			
Benzene	10J1263	20.0	ug/L	N/A	1.00	21.1	105			79-120			
Bromodichloromethane (Dichlorobromomethane)	10J1263	20.0	ug/L	N/A	1.00	21.4	107			76-121			
Bromoform	10J1263	20.0	ug/L	N/A	1.00	20.1	101			69-120			
Bromomethane (Methyl bromide)	10J1263	20.0	ug/L	N/A	5.00	23.4	117			64-120			
Carbon tetrachloride	10J1263	20.0	ug/L	N/A	1.00	21.2	106			70-129			
Chlorobenzene	10J1263	20.0	ug/L	N/A	1.00	21.8	109			78-120			
Chloroethane	10J1263	20.0	ug/L	N/A	5.00	21.6	108			67-120			
2-Chloroethylvinyl ether	10J1263	20.0	ug/L	N/A	5.00	21.1	105			10-212			
Chloroform	10J1263	20.0	ug/L	N/A	1.00	20.9	104			77-120			
Chloromethane (Methyl chloride)	10J1263	20.0	ug/L	N/A	5.00	21.6	108			58-120			
Dibromochloromethane (Chlorodibromomethane)	10J1263	20.0	ug/L	N/A	1.00	21.8	109			76-123			
1,2-Dichlorobenzene	10J1263	20.0	ug/L	N/A	1.00	23.5	118			78-123			
1,4-Dichlorobenzene	10J1263	20.0	ug/L	N/A	1.00	23.4	117			74-120			
1,3-Dichlorobenzene	10J1263	20.0	ug/L	N/A	1.00	23.4	117			76-121			
1,1-Dichloroethane	10J1263	20.0	ug/L	N/A	1.00	21.3	107			79-120			
1,2-Dichloroethane	10J1263	20.0	ug/L	N/A	1.00	21.9	110			75-120			
trans-1,2-Dichloroethylene	10J1263	20.0	ug/L	N/A	1.00	20.2	101			79-120			
1,1-Dichloroethene	10J1263	20.0	ug/L	N/A	1.00	19.0	95			71-121			
1,2-Dichloropropane	10J1263	20.0	ug/L	N/A	1.00	21.4	107			80-120			
cis-1,3-Dichloropropene	10J1263	20.0	ug/L	N/A	1.00	22.4	112			80-120			
trans-1,3-Dichloropropene	10J1263	20.0	ug/L	N/A	1.00	22.6	113			74-120			
Ethylbenzene	10J1263	20.0	ug/L	N/A	1.00	22.4	112			79-120			
n-Hexane	10J1263	20.0	ug/L	N/A	5.00	35.5	177			57-180			
Methylene chloride	10J1263	20.0	ug/L	N/A	5.00	20.0	100			76-120			

Burgess & Niple (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
1,1,2,2-Tetrachloroethane	10J1263		20.0	ug/L	N/A	1.00	22.0		110		74-120			
Tetrachloroethylene	10J1263		20.0	ug/L	N/A	1.00	21.7		109		62-128			
Toluene	10J1263		20.0	ug/L	N/A	1.00	21.6		108		79-120			
1,1,1-Trichloroethane	10J1263		20.0	ug/L	N/A	1.00	22.1		110		74-121			
1,1,2-Trichloroethane	10J1263		20.0	ug/L	N/A	1.00	21.6		108		75-120			
Trichloroethylene	10J1263		20.0	ug/L	N/A	1.00	21.0		105		77-120			
Trichlorofluoromethane	10J1263		20.0	ug/L	N/A	1.00	21.5		107		71-136			
Vinyl chloride	10J1263		20.0	ug/L	N/A	1.00	20.6		103		65-126			
Benzene	10J1270		20.0	ug/L	N/A	1.00	20.5		103		79-120			
Bromodichloromethane (Dichlorobromomethane)	10J1270		20.0	ug/L	N/A	1.00	20.5		102		76-121			
Bromoform	10J1270		20.0	ug/L	N/A	1.00	20.2		101		69-120			
Bromomethane (Methyl bromide)	10J1270		20.0	ug/L	N/A	5.00	18.6		93		64-120			
Carbon tetrachloride	10J1270		20.0	ug/L	N/A	1.00	20.1		100		70-129			
Chlorobenzene	10J1270		20.0	ug/L	N/A	1.00	21.2		106		78-120			
Chloroethane	10J1270		20.0	ug/L	N/A	5.00	19.1		96		67-120			
2-Chloroethylvinyl ether	10J1270		20.0	ug/L	N/A	5.00	21.5		108		10-212			
Chloroform	10J1270		20.0	ug/L	N/A	1.00	19.0		95		77-120			
Chloromethane (Methyl chloride)	10J1270		20.0	ug/L	N/A	5.00	18.8		94		58-120			
Dibromochloromethane (Chlorodibromomethane)	10J1270		20.0	ug/L	N/A	1.00	20.7		103		76-123			
1,2-Dichlorobenzene	10J1270		20.0	ug/L	N/A	1.00	22.5		112		78-123			
1,4-Dichlorobenzene	10J1270		20.0	ug/L	N/A	1.00	21.9		109		74-120			
1,3-Dichlorobenzene	10J1270		20.0	ug/L	N/A	1.00	22.2		111		76-121			
1,1-Dichloroethane	10J1270		20.0	ug/L	N/A	1.00	19.1		95		79-120			
1,2-Dichloroethane	10J1270		20.0	ug/L	N/A	1.00	19.4		97		75-120			
trans-1,2-Dichloroethene	10J1270		20.0	ug/L	N/A	1.00	18.9		94		79-120			
1,1-Dichloroethene	10J1270		20.0	ug/L	N/A	1.00	17.4		87		71-121			
1,2-Dichloropropane	10J1270		20.0	ug/L	N/A	1.00	20.5		103		80-120			
cis-1,3-Dichloropropene	10J1270		20.0	ug/L	N/A	1.00	21.2		106		80-120			
trans-1,3-Dichloropropene	10J1270		20.0	ug/L	N/A	1.00	22.0		110		74-120			
Ethylbenzene	10J1270		20.0	ug/L	N/A	1.00	21.6		108		79-120			
n-Hexane	10J1270		20.0	ug/L	N/A	5.00	22.1		110		57-180			
Methylene chloride	10J1270		20.0	ug/L	N/A	5.00	19.1		95		76-120			
1,1,2,2-Tetrachloroethane	10J1270		20.0	ug/L	N/A	1.00	23.2		116		74-120			
Tetrachloroethylene	10J1270		20.0	ug/L	N/A	1.00	20.1		100		62-128			
Toluene	10J1270		20.0	ug/L	N/A	1.00	21.1		106		79-120			
1,1,1-Trichloroethane	10J1270		20.0	ug/L	N/A	1.00	20.7		103		74-121			
1,1,2-Trichloroethane	10J1270		20.0	ug/L	N/A	1.00	21.4		107		75-120			
Trichloroethylene	10J1270		20.0	ug/L	N/A	1.00	20.2		101		77-120			
Trichlorofluoromethane	10J1270		20.0	ug/L	N/A	1.00	19.1		95		71-136			
Vinyl chloride	10J1270		20.0	ug/L	N/A	1.00	18.3		92		65-126			

Burgess & Niple (Landfill)
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Work Order: DTJ0672
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 Reported: 11/05/10 15:21

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup Result	% REC Limits	RPD Limit	Q	
General Chemistry Parameters													
QC Source Sample: DTJ0654-04													
Chemical Oxygen Demand	10J0774	42.6	20.0	mg/L	N/A	10.0	55.9	66		59-139			
QC Source Sample: DTJ0672-01													
Chemical Oxygen Demand	10J0774	13.2	20.0	mg/L	N/A	10.0	36.6	117		59-139			
QC Source Sample: DTJ0654-01													
Ammonia, Undistilled as N	10J0855	0.0620	0.500	mg/L	N/A	0.0500	0.482	84		78-110			
QC Source Sample: DTJ0672-04													
Ammonia, Undistilled as N	10J0855	0.269	0.500	mg/L	N/A	0.0500	0.701	86		78-110			
QC Source Sample: DTJ0672-02													
Chloride	10K0150	8.35	15.0	mg/L	N/A	1.00	24.7	24.7	109	90-110	0	20	
Total Metals													
QC Source Sample: DTJ0672-01													
Sodium	10J0798	25.4	21.0	mg/L	N/A	1.00	48.1	49.4	108	115	75-125	3	20
Volatile Organic Compounds by GC/MS													
QC Source Sample: DTJ0666-15													
Benzene	10J1015	<100	2000	ug/L	N/A	100	2110	2000	106	100	79-120	5	25
Bromodichloromethane (Dichlorobromomethane)	10J1015	<100	2000	ug/L	N/A	100	2080	1880	104	94	76-121	10	25
Bromoform	10J1015	<100	2000	ug/L	N/A	100	1950	1690	98	84	69-120	14	25
Bromomethane (Methyl bromide)	10J1015	<500	2000	ug/L	N/A	500	2000	1780	100	89	64-120	11	25
Carbon tetrachloride	10J1015	<100	2000	ug/L	N/A	100	2130	1970	107	98	70-129	8	25
Chlorobenzene	10J1015	<100	2000	ug/L	N/A	100	2000	1840	100	92	78-120	8	25
Chloroethane	10J1015	<500	2000	ug/L	N/A	500	2370	2110	119	105	67-120	12	25
2-Chloroethylvinyl ether	10J1015	<500	2000	ug/L	N/A	500	1390	1130	70	56	10-212	21	25
Chloroform	10J1015	<100	2000	ug/L	N/A	100	2060	1910	103	95	77-120	8	25
Chloromethane (Methyl chloride)	10J1015	<500	2000	ug/L	N/A	500	2050	1790	102	90	58-120	13	25
Dibromochloromethane (Chlorodibromomethane)	10J1015	<100	2000	ug/L	N/A	100	1870	1650	94	83	76-123	13	25
1,2-Dichlorobenzene	10J1015	<100	2000	ug/L	N/A	100	1900	1720	95	86	78-123	10	25
1,4-Dichlorobenzene	10J1015	<100	2000	ug/L	N/A	100	1940	1820	97	91	74-120	6	25
1,3-Dichlorobenzene	10J1015	<100	2000	ug/L	N/A	100	1920	1810	96	91	76-121	6	25
1,1-Dichloroethane	10J1015	358	2000	ug/L	N/A	100	2680	1980	116	81	79-120	30	25
1,2-Dichloroethane	10J1015	<100	2000	ug/L	N/A	100	2110	1900	105	95	75-120	10	25
trans-1,2-Dichloroethene	10J1015	<100	2000	ug/L	N/A	100	2630	2100	131	105	79-120	22	25
1,1-Dichloroethene	10J1015	<100	2000	ug/L	N/A	100	2240	2000	112	100	71-121	11	25
1,2-Dichloropropane	10J1015	<100	2000	ug/L	N/A	100	2140	1920	107	96	80-120	11	25
cis-1,3-Dichloropropene	10J1015	<100	2000	ug/L	N/A	100	2160	1960	108	98	80-120	10	25
trans-1,3-Dichloropropene	10J1015	<100	2000	ug/L	N/A	100	1970	1770	99	89	74-120	11	25
Ethylbenzene	10J1015	<100	2000	ug/L	N/A	100	2120	1930	106	96	79-120	10	25
n-Hexane	10J1015	<500	2000	ug/L	N/A	500	2920	2370	146	119	57-180	21	25
Methylene chloride	10J1015	2660	2000	ug/L	N/A	500	3330	2940	33	14	76-120	13	25
1,1,2,2-Tetrachloroethane	10J1015	<100	2000	ug/L	N/A	100	1990	1760	99	88	74-120	12	25
Tetrachloroethene	10J1015	<100	2000	ug/L	N/A	100	2280	1980	114	99	62-128	14	25
Toluene	10J1015	<100	2000	ug/L	N/A	100	2170	2000	108	100	79-120	8	25
1,1,1-Trichloroethane	10J1015	<100	2000	ug/L	N/A	100	2170	2000	109	100	74-121	8	25
1,1,2-Trichloroethane	10J1015	<100	2000	ug/L	N/A	100	1980	1780	99	89	75-120	11	25
Trichloroethene	10J1015	<100	2000	ug/L	N/A	100	2210	1960	111	98	77-120	12	25
Trichlorofluoromethane	10J1015	<100	2000	ug/L	N/A	100	2290	2080	114	104	71-136	10	25
Vinyl chloride	10J1015	861	2000	ug/L	N/A	100	3030	2810	109	97	65-126	8	25

Burgess & Niple (Landfill)
 5085 Reed Rd.
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Work Order: DTJ0672
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Received: 10/15/10
 Reported: 11/05/10 15:21

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup Result	% REC Limits	RPD	Limit	Q
Volatile Organic Compounds by GC/MS													
QC Source Sample: DTJ0666-11													
Benzene	10J1118	<1000	20000	ug/L	N/A	1000	21600	21400	108	107	79-120	1	25
Bromodichloromethane (Dichlorobromomethane)	10J1118	<1000	20000	ug/L	N/A	1000	21100	20200	105	101	76-121	4	25
Bromoform	10J1118	<1000	20000	ug/L	N/A	1000	18700	18400	93	92	69-120	2	25
Bromomethane (Methyl bromide)	10J1118	<5000	20000	ug/L	N/A	5000	19100	18700	96	93	64-120	2	25
Carbon tetrachloride	10J1118	<1000	20000	ug/L	N/A	1000	22600	22500	113	113	70-129	1	25
Chlorobenzene	10J1118	<1000	20000	ug/L	N/A	1000	20400	20500	102	102	78-120	1	25
Chloroethane	10J1118	32900	20000	ug/L	N/A	5000	55000	51700	110	94	67-120	6	25
2-Chloroethylvinyl ether	10J1118	<5000	20000	ug/L	N/A	5000	19300	20300	97	101	10-212	5	25
Chloroform	10J1118	<1000	20000	ug/L	N/A	1000	20900	20400	105	102	77-120	3	25
Chloromethane (Methyl chloride)	10J1118	<5000	20000	ug/L	N/A	5000	19800	19400	99	97	58-120	2	25
Dibromochloromethane (Chlorodibromomethane)	10J1118	<1000	20000	ug/L	N/A	1000	19300	19600	96	98	76-123	2	25
1,2-Dichlorobenzene	10J1118	<1000	20000	ug/L	N/A	1000	19500	20100	98	100	78-123	3	25
1,4-Dichlorobenzene	10J1118	<1000	20000	ug/L	N/A	1000	19400	20100	97	101	74-120	4	25
1,3-Dichlorobenzene	10J1118	<1000	20000	ug/L	N/A	1000	19300	19900	96	100	76-121	3	25
1,1-Dichloroethane	10J1118	4020	20000	ug/L	N/A	1000	26600	24800	113	104	79-120	7	25
1,2-Dichloroethane	10J1118	<1000	20000	ug/L	N/A	1000	21300	20800	106	104	75-120	2	25
trans-1,2-Dichloroethene	10J1118	710	20000	ug/L	N/A	1000	22000	21300	107	103	79-120	3	25
1,1-Dichloroethene	10J1118	<1000	20000	ug/L	N/A	1000	20800	19800	104	99	71-121	5	25
1,2-Dichloropropane	10J1118	<1000	20000	ug/L	N/A	1000	20900	20600	104	103	80-120	1	25
cis-1,3-Dichloropropene	10J1118	<1000	20000	ug/L	N/A	1000	21300	20800	106	104	80-120	2	25
trans-1,3-Dichloropropene	10J1118	<1000	20000	ug/L	N/A	1000	19500	19400	97	97	74-120	1	25
Ethylbenzene	10J1118	<1000	20000	ug/L	N/A	1000	21600	21500	108	107	79-120	1	25
n-Hexane	10J1118	<5000	20000	ug/L	N/A	5000	20700	18800	103	94	57-180	9	25
Methylene chloride	10J1118	6910	20000	ug/L	N/A	5000	29000	28300	110	107	76-120	2	25
1,1,2,2-Tetrachloroethane	10J1118	<1000	20000	ug/L	N/A	1000	19700	19300	98	96	74-120	2	25
Tetrachloroethene	10J1118	<1000	20000	ug/L	N/A	1000	22200	22900	111	115	62-128	3	25
Toluene	10J1118	<1000	20000	ug/L	N/A	1000	21100	21200	105	106	79-120	1	25
1,1,1-Trichloroethane	10J1118	<1000	20000	ug/L	N/A	1000	23500	23100	117	116	74-121	1	25
1,1,2-Trichloroethane	10J1118	<1000	20000	ug/L	N/A	1000	19900	19600	99	98	75-120	2	25
Trichloroethene	10J1118	<1000	20000	ug/L	N/A	1000	21800	20700	109	103	77-120	5	25
Trichlorofluoromethane	10J1118	<1000	20000	ug/L	N/A	1000	22300	21800	112	109	71-136	2	25
Vinyl chloride	10J1118	2830	20000	ug/L	N/A	1000	23700	22800	104	100	65-126	4	25
QC Source Sample: DTJ0636-01													
Benzene	10J1199	<1	20.0	ug/L	N/A	1.00	20.3	14.7	102	74	79-120	32	25
Bromodichloromethane (Dichlorobromomethane)	10J1199	<1	20.0	ug/L	N/A	1.00	18.4	13.3	92	67	76-121	32	25
Bromoform	10J1199	<1	20.0	ug/L	N/A	1.00	17.3	13.2	87	66	69-120	27	25
Bromomethane (Methyl bromide)	10J1199	<5	20.0	ug/L	N/A	5.00	15.3	13.6	76	68	64-120	11	25
Carbon tetrachloride	10J1199	<1	20.0	ug/L	N/A	1.00	19.8	13.6	99	68	70-129	37	25
Chlorobenzene	10J1199	<1	20.0	ug/L	N/A	1.00	19.8	14.1	99	70	78-120	34	25
Chloroethane	10J1199	<5	20.0	ug/L	N/A	5.00	18.4	14.4	92	72	67-120	25	25
2-Chloroethylvinyl ether	10J1199	<5	20.0	ug/L	N/A	5.00	10.5	<5.00	53		10-212	25	M
Chloroform	10J1199	<1	20.0	ug/L	N/A	1.00	18.4	13.1	92	66	77-120	34	25
Chloromethane (Methyl chloride)	10J1199	<5	20.0	ug/L	N/A	5.00	18.5	14.3	92	72	58-120	26	25
Dibromochloromethane (Chlorodibromomethane)	10J1199	<1	20.0	ug/L	N/A	1.00	18.3	13.8	91	69	76-123	28	25

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MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
QC Source Sample: DTJ0636-01														
1,2-Dichlorobenzene	10J1199	<1	20.0	ug/L	N/A	1.00	19.6	13.8	98	69	78-123	35	25	M
1,4-Dichlorobenzene	10J1199	<1	20.0	ug/L	N/A	1.00	19.3	12.9	96	65	74-120	39	25	M
1,3-Dichlorobenzene	10J1199	<1	20.0	ug/L	N/A	1.00	19.6	13.2	98	66	76-121	39	25	M
1,1-Dichloroethane	10J1199	<1	20.0	ug/L	N/A	1.00	18.8	13.6	94	68	79-120	32	25	M
1,2-Dichloroethane	10J1199	<1	20.0	ug/L	N/A	1.00	18.8	13.8	94	69	75-120	31	25	M
trans-1,2-Dichloroethene	10J1199	<1	20.0	ug/L	N/A	1.00	18.7	13.4	93	67	79-120	33	25	M
1,1-Dichloroethene	10J1199	<1	20.0	ug/L	N/A	1.00	17.4	12.5	87	63	71-121	33	25	M
1,2-Dichloropropane	10J1199	<1	20.0	ug/L	N/A	1.00	19.4	14.1	97	71	80-120	32	25	M
cis-1,3-Dichloropropene	10J1199	<1	20.0	ug/L	N/A	1.00	19.8	14.2	99	71	80-120	33	25	M
trans-1,3-Dichloropropene	10J1199	<1	20.0	ug/L	N/A	1.00	20.0	14.7	100	73	74-120	31	25	M
Ethylbenzene	10J1199	<1	20.0	ug/L	N/A	1.00	20.4	13.8	102	69	79-120	39	25	M
n-Hexane	10J1199	<5	20.0	ug/L	N/A	5.00	18.4	11.5	92	58	57-180	46	25	M
Methylene chloride	10J1199	<5	20.0	ug/L	N/A	5.00	17.9	13.2	90	66	76-120	30	25	M
1,1,2,2-Tetrachloroethane	10J1199	<1	20.0	ug/L	N/A	1.00	20.6	14.7	103	74	74-120	33	25	M
Tetrachloroethene	10J1199	<1	20.0	ug/L	N/A	1.00	19.0	12.0	95	60	62-128	45	25	M
Toluene	10J1199	<1	20.0	ug/L	N/A	1.00	20.4	14.5	102	72	79-120	34	25	M
1,1,1-Trichloroethane	10J1199	<1	20.0	ug/L	N/A	1.00	20.5	14.4	102	72	74-121	35	25	M
1,1,2-Trichloroethane	10J1199	<1	20.0	ug/L	N/A	1.00	19.8	15.0	99	75	75-120	28	25	M
Trichloroethene	10J1199	<1	20.0	ug/L	N/A	1.00	19.8	13.7	99	68	77-120	37	25	M
Trichlorofluoromethane	10J1199	<1	20.0	ug/L	N/A	1.00	18.6	13.0	93	65	71-136	35	25	M
Vinyl chloride	10J1199	<1	20.0	ug/L	N/A	1.00	18.3	14.2	92	71	65-126	25	25	M
QC Source Sample: DTJ0665-04														
Benzene	10J1263	<10	200	ug/L	N/A	10.0	224	219	112	110	79-120	2	25	
Bromodichloromethane (Dichlorobromomethane)	10J1263	<10	200	ug/L	N/A	10.0	223	222	112	111	76-121	1	25	
Bromoform	10J1263	<10	200	ug/L	N/A	10.0	195	182	98	91	69-120	7	25	
Bromomethane (Methyl bromide)	10J1263	<50	200	ug/L	N/A	50.0	243	236	122	118	64-120	3	25	M
Carbon tetrachloride	10J1263	<10	200	ug/L	N/A	10.0	237	225	118	113	70-129	5	25	
Chlorobenzene	10J1263	<10	200	ug/L	N/A	10.0	220	209	110	105	78-120	5	25	
Chloroethane	10J1263	34.8	200	ug/L	N/A	50.0	233	234	99	100	67-120	1	25	
2-Chloroethylvinyl ether	10J1263	<50	200	ug/L	N/A	50.0	214	18.7	11	9	10-212	13	25	M
Chloroform	10J1263	<10	200	ug/L	N/A	10.0	219	213	109	106	77-120	3	25	
Chloromethane (Methyl chloride)	10J1263	5.40	200	ug/L	N/A	50.0	216	215	105	105	58-120	1	25	
Dibromochloromethane (Chlorodibromomethane)	10J1263	<10	200	ug/L	N/A	10.0	217	209	108	104	76-123	4	25	
1,2-Dichlorobenzene	10J1263	<10	200	ug/L	N/A	10.0	214	210	107	105	78-123	2	25	
1,4-Dichlorobenzene	10J1263	<10	200	ug/L	N/A	10.0	215	209	108	105	74-120	3	25	
1,3-Dichlorobenzene	10J1263	<10	200	ug/L	N/A	10.0	215	208	107	104	76-121	3	25	
1,1-Dichloroethane	10J1263	5.00	200	ug/L	N/A	10.0	253	251	124	123	79-120	1	25	M
1,2-Dichloroethane	10J1263	94.1	200	ug/L	N/A	10.0	229	224	67	65	75-120	2	25	M
trans-1,2-Dichloroethene	10J1263	<10	200	ug/L	N/A	10.0	228	230	114	115	79-120	1	25	
1,1-Dichloroethene	10J1263	<10	200	ug/L	N/A	10.0	212	212	106	106	71-121	0	25	
1,2-Dichloropropane	10J1263	<10	200	ug/L	N/A	10.0	225	216	113	108	80-120	4	25	
cis-1,3-Dichloropropene	10J1263	<10	200	ug/L	N/A	10.0	227	224	113	112	80-120	1	25	
trans-1,3-Dichloropropene	10J1263	<10	200	ug/L	N/A	10.0	230	218	115	109	74-120	5	25	
Ethylbenzene	10J1263	<10	200	ug/L	N/A	10.0	232	222	116	111	79-120	5	25	
n-Hexane	10J1263	<50	200	ug/L	N/A	50.0	224	242	112	121	57-180	7	25	

Burgess & Nippe (Landfill)
 5085 Reed Rd.
 Columbus, OH 43220
 Michael Akins

Work Order: DTJ0672
 Project: Wayne Reclamation & Recycling (Indiana)
 Project Number: Columbia City

Received: 10/15/10
 Reported: 11/05/10 15:21

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
QC Source Sample: DTJ0665-04														
Methylene chloride	10J1263	<50	200	ug/L	N/A	50.0	328	334	164	167	76-120	2	25	M
1,1,2,2-Tetrachloroethane	10J1263	<10	200	ug/L	N/A	10.0	219	212	110	106	74-120	4	25	
Tetrachloroethene	10J1263	<10	200	ug/L	N/A	10.0	218	198	109	99	62-128	10	25	
Toluene	10J1263	<10	200	ug/L	N/A	10.0	228	218	114	109	79-120	5	25	
1,1,1-Trichloroethane	10J1263	<10	200	ug/L	N/A	10.0	405	404	203	202	74-121	0	25	M
1,1,2-Trichloroethane	10J1263	<10	200	ug/L	N/A	10.0	221	209	110	104	75-120	5	25	
Trichloroethene	10J1263	<10	200	ug/L	N/A	10.0	1010	1050	507	524	77-120	3	25	M
Trichlorofluoromethane	10J1263	<10	200	ug/L	N/A	10.0	243	229	122	114	71-136	6	25	
Vinyl chloride	10J1263	5300	200	ug/L	N/A	10.0	263	267	-2520	-2520	65-126	1	25	M
QC Source Sample: DTJ0665-01RE1														
Benzene	10J1270	<1000	20000	ug/L	N/A	1000	20400	15200	102	76	79-120	29	25	P10,M
Bromodichloromethane (Dichlorobromomethane)	10J1270	<1000	20000	ug/L	N/A	1000	19000	14200	95	71	76-121	29	25	P10,M
Bromoform	10J1270	<1000	20000	ug/L	N/A	1000	17800	13800	89	69	69-120	26	25	P10,M
Bromomethane (Methyl bromide)	10J1270	<5000	20000	ug/L	N/A	5000	17200	14100	86	70	64-120	20	25	P10
Carbon tetrachloride	10J1270	<1000	20000	ug/L	N/A	1000	20700	14900	103	74	70-129	33	25	P10,M
Chlorobenzene	10J1270	<1000	20000	ug/L	N/A	1000	20500	15100	102	75	78-120	30	25	P10,M
Chloroethane	10J1270	<5000	20000	ug/L	N/A	5000	18800	14500	94	72	67-120	26	25	P10,M
2-Chloroethylvinyl ether	10J1270	<5000	20000	ug/L	N/A	5000	20200	14900	101	74	10-212	30	25	P10,M
Chloroform	10J1270	<1000	20000	ug/L	N/A	1000	18300	13600	91	68	77-120	29	25	P10,M
Chloromethane (Methyl chloride)	10J1270	<5000	20000	ug/L	N/A	5000	18000	14300	90	71	58-120	23	25	P10
Dibromochloromethane (Chlorodibromomethane)	10J1270	<1000	20000	ug/L	N/A	1000	19900	14600	99	73	76-123	31	25	P10,M
1,2-Dichlorobenzene	10J1270	<1000	20000	ug/L	N/A	1000	20000	14800	100	74	78-123	30	25	P10,M
1,4-Dichlorobenzene	10J1270	<1000	20000	ug/L	N/A	1000	19500	14600	97	73	74-120	28	25	P10,M
1,3-Dichlorobenzene	10J1270	<1000	20000	ug/L	N/A	1000	19800	14700	99	73	76-121	30	25	P10,M
1,1-Dichloroethane	10J1270	<1000	20000	ug/L	N/A	1000	18400	13800	92	69	79-120	29	25	P10,M
1,2-Dichloroethane	10J1270	93100	20000	ug/L	N/A	1000	114000	110000	104	84	75-120	3	25	P10
trans-1,2-Dichloroethene	10J1270	<1000	20000	ug/L	N/A	1000	18400	14000	92	70	79-120	27	25	P10,M
1,1-Dichloroethene	10J1270	<1000	20000	ug/L	N/A	1000	17500	13100	87	65	71-121	29	25	P10,M
1,2-Dichloropropane	10J1270	<1000	20000	ug/L	N/A	1000	19800	14700	99	73	80-120	30	25	P10,M
cis-1,3-Dichloropropene	10J1270	<1000	20000	ug/L	N/A	1000	19800	14800	99	74	80-120	29	25	P10,M
trans-1,3-Dichloropropene	10J1270	<1000	20000	ug/L	N/A	1000	20600	15100	103	76	74-120	31	25	P10,M
Ethylbenzene	10J1270	<1000	20000	ug/L	N/A	1000	21200	15600	106	78	79-120	31	25	P10,M
n-Hexane	10J1270	<5000	20000	ug/L	N/A	5000	17700	14400	88	72	57-180	21	25	P10
Methylene chloride	10J1270	<5000	20000	ug/L	N/A	5000	17600	13400	88	67	76-120	27	25	P10,M
1,1,2,2-Tetrachloroethane	10J1270	<1000	20000	ug/L	N/A	1000	19700	14600	99	73	74-120	30	25	P10,M
Tetrachloroethene	10J1270	<1000	20000	ug/L	N/A	1000	21400	15600	107	78	62-128	31	25	P10,M
Toluene	10J1270	<1000	20000	ug/L	N/A	1000	21000	15400	105	77	79-120	31	25	P10,M
1,1,1-Trichloroethane	10J1270	<1000	20000	ug/L	N/A	1000	20800	15200	104	76	74-121	31	25	P10,M
1,1,2-Trichloroethane	10J1270	<1000	20000	ug/L	N/A	1000	20700	15200	104	76	75-120	31	25	P10,M
Trichloroethene	10J1270	<1000	20000	ug/L	N/A	1000	20300	15000	101	75	77-120	30	25	P10,M
Trichlorofluoromethane	10J1270	<1000	20000	ug/L	N/A	1000	19100	14100	95	70	71-136	30	25	P10,M
Vinyl chloride	10J1270	15200	20000	ug/L	N/A	1000	33100	29200	90	70	65-126	12	25	P10

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CERTIFICATION SUMMARY

Any abnormalities or departures from sample acceptance policy shall be documented on the Chain of Custody and/or Case Narrative included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC).

DATA QUALIFIERS AND DEFINITIONS

- H** Sample analysis performed past method-specified holding time.
L1 Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
M The MS, MSD, and/or RPD are outside of acceptance limits due to matrix interference. Please see Blank Spike (LCS).
P10 Sample tested positive for residual chlorine.
P11 Sample was not sufficiently preserved at time of collection. Sample pH is >2.

ADDITIONAL COMMENTS

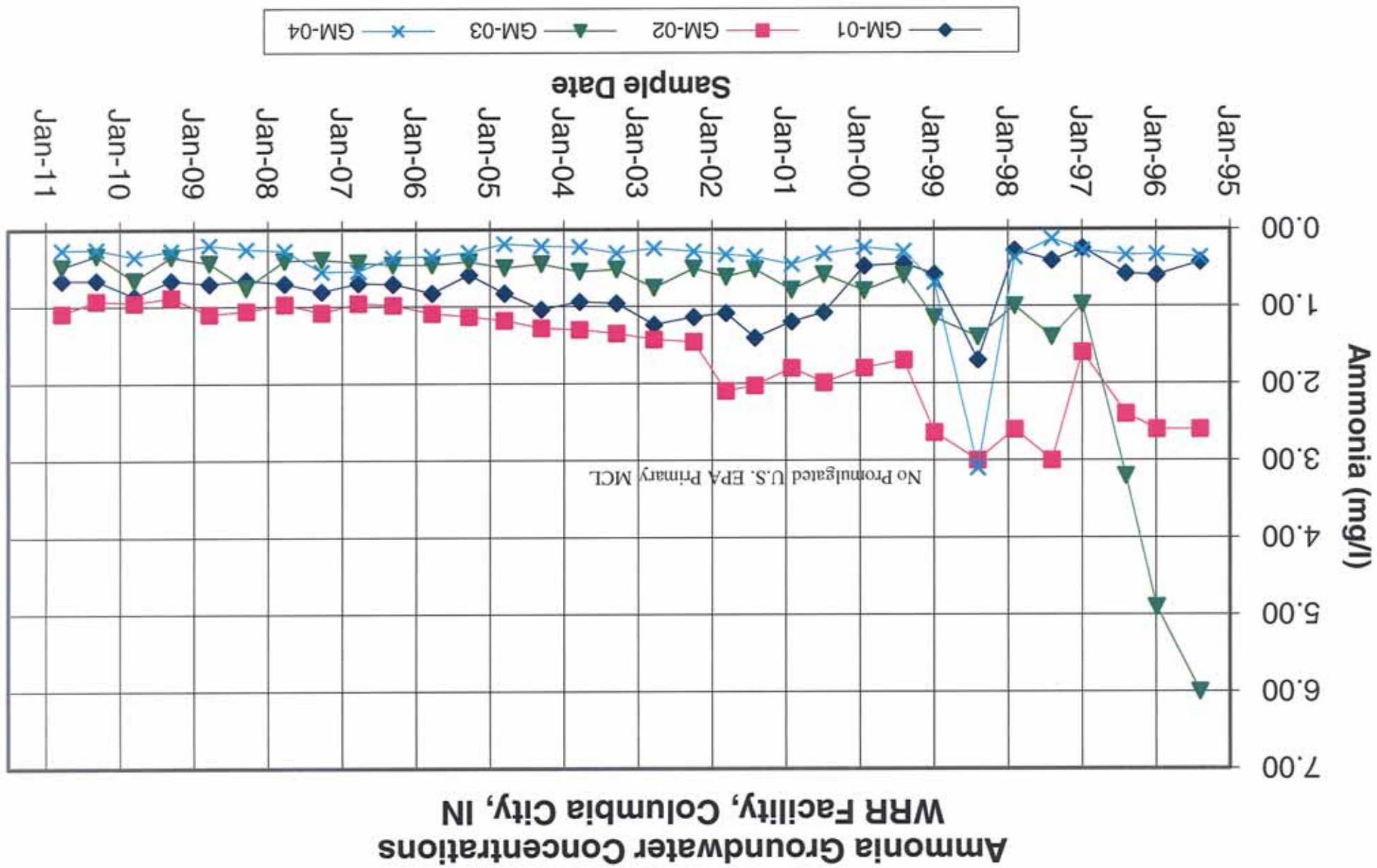
Results are reported on a wet weight basis unless otherwise noted in the units.

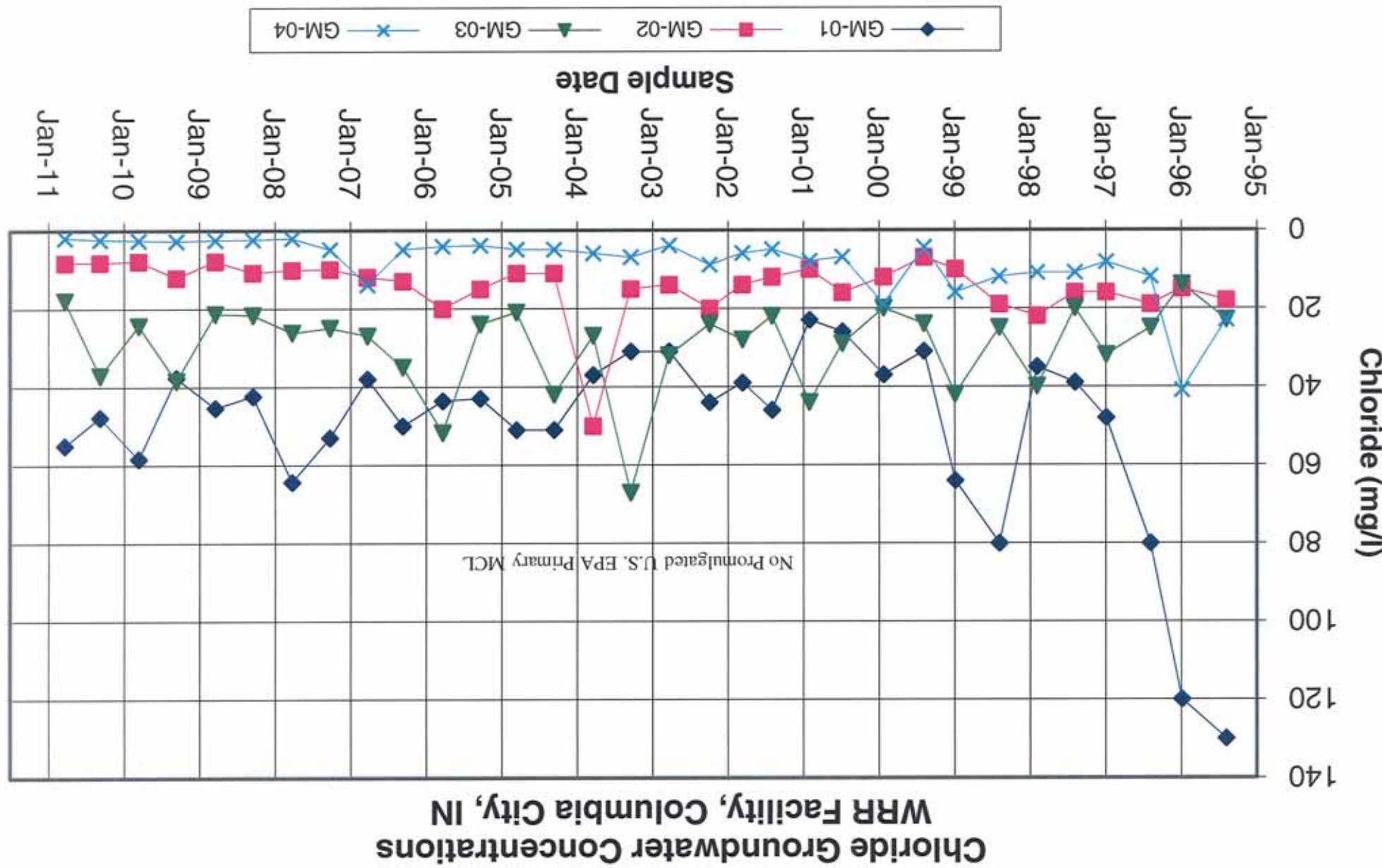
ANALYSIS LOCATIONS

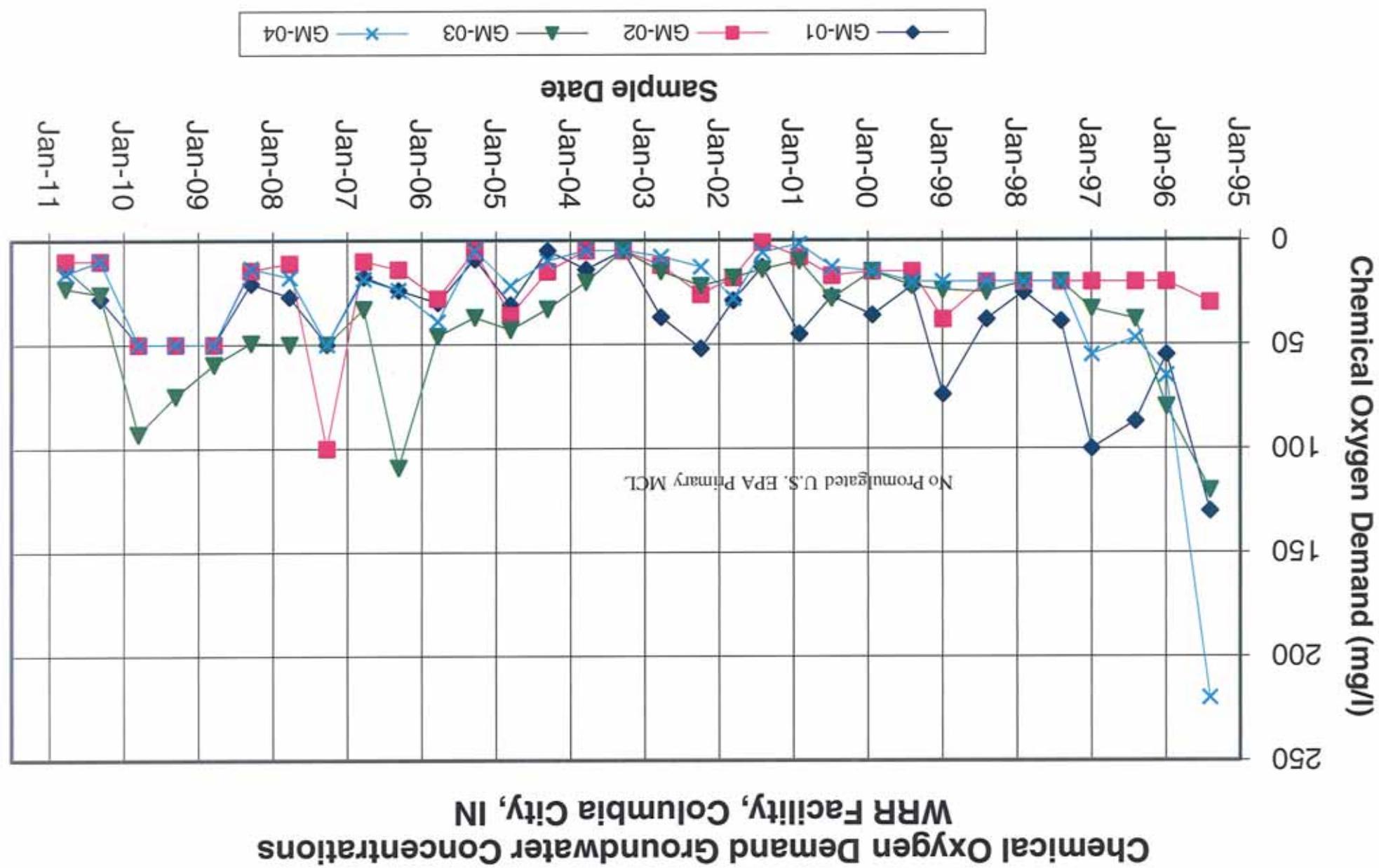
Any analyses listed below were analyzed in satellite facilities

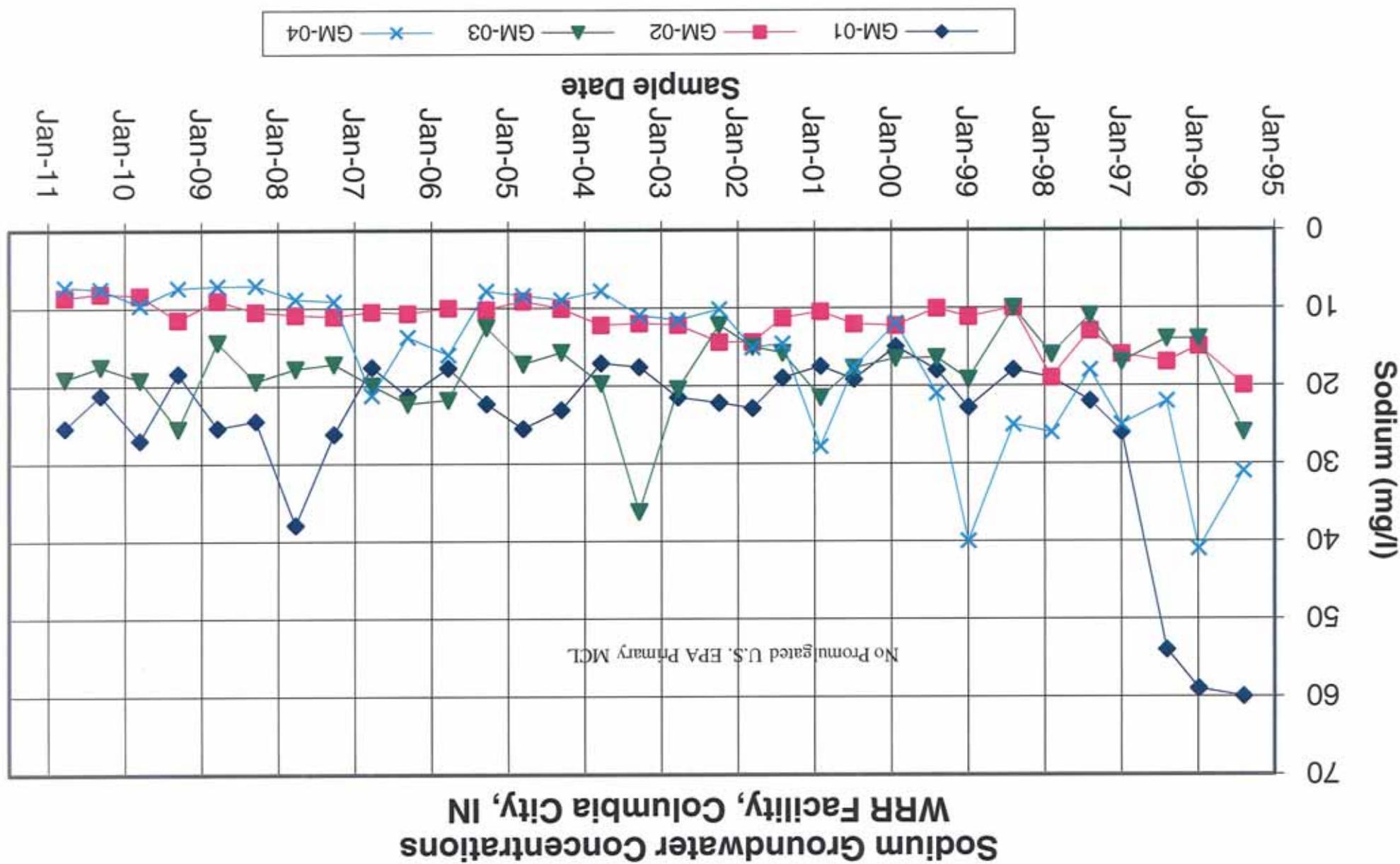
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Temperature - Client Supplied	Water - NonPotable
pH - Client Supplied	Water - NonPotable
Conductance - Client Supplied	Water - NonPotable

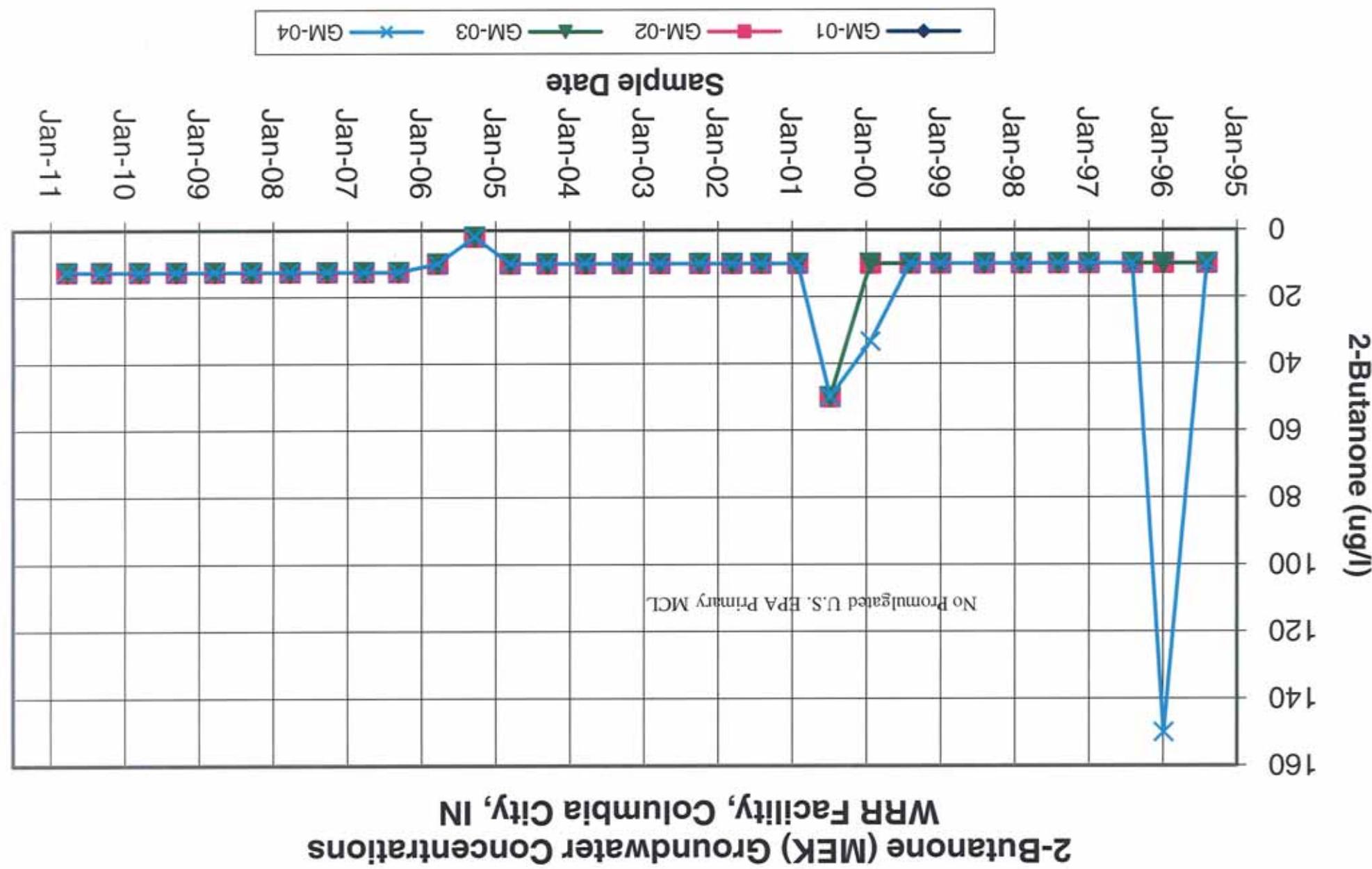
ATTACHMENT 3
TIME-VERSUS-CONCENTRATION PLOTS

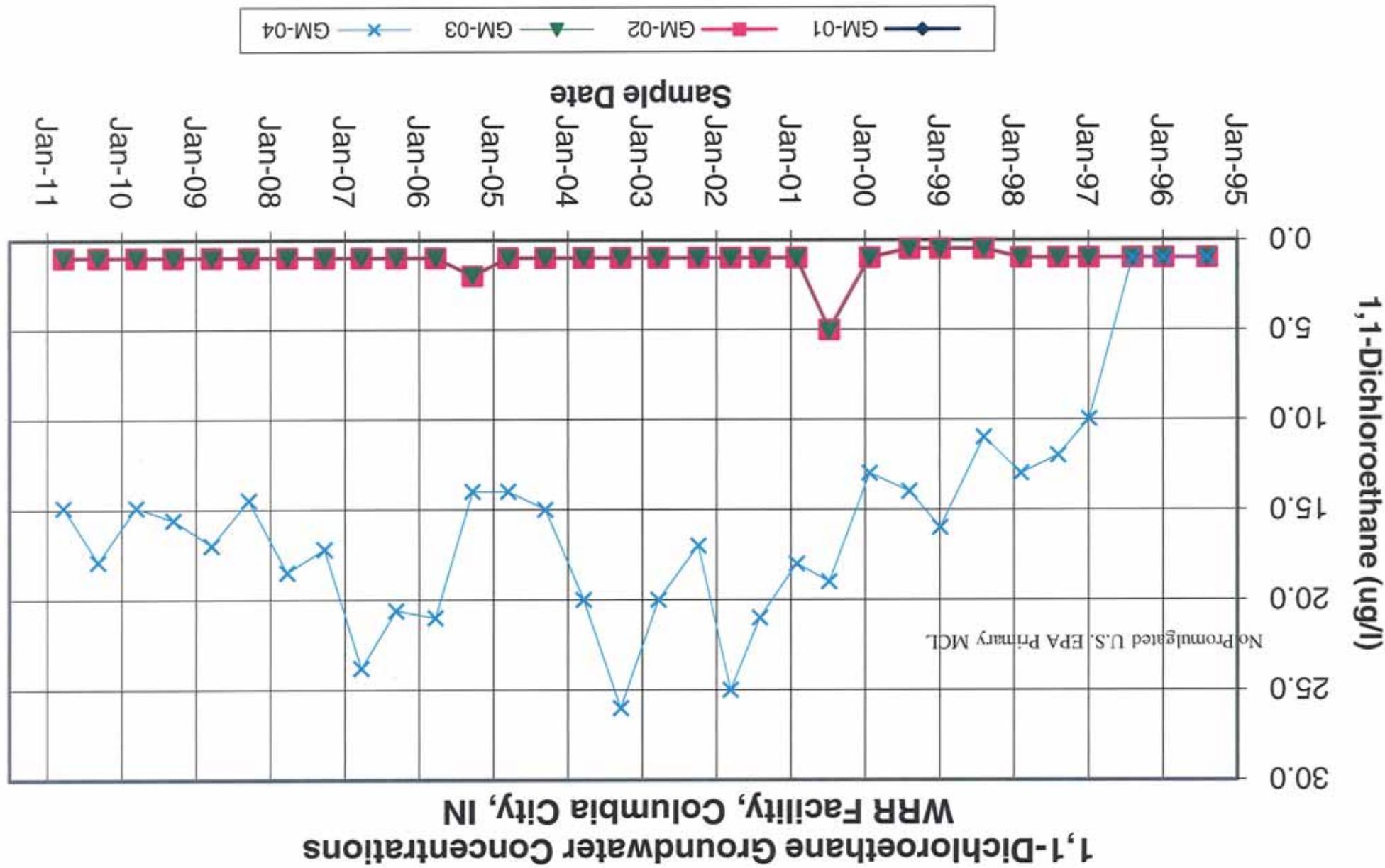


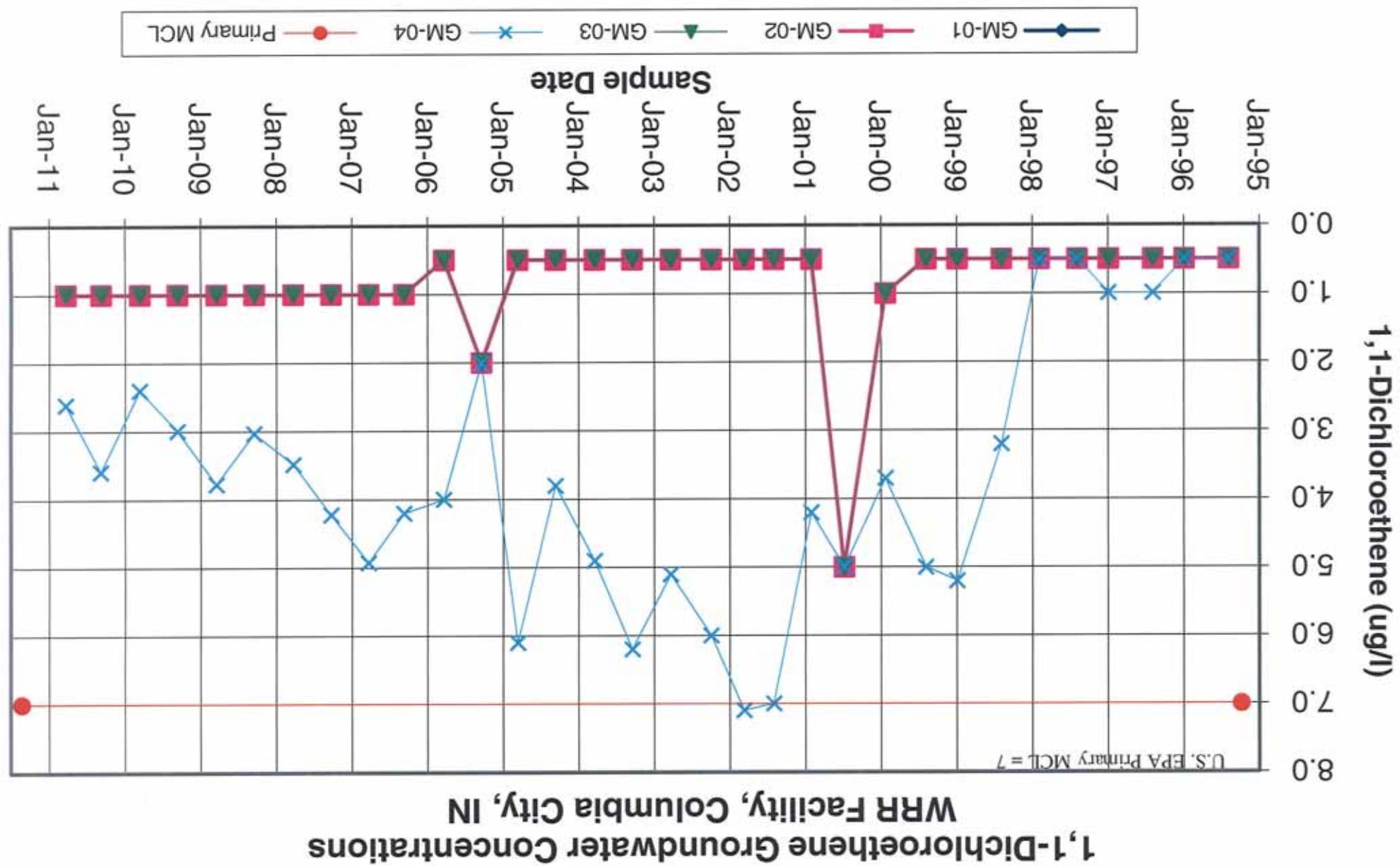


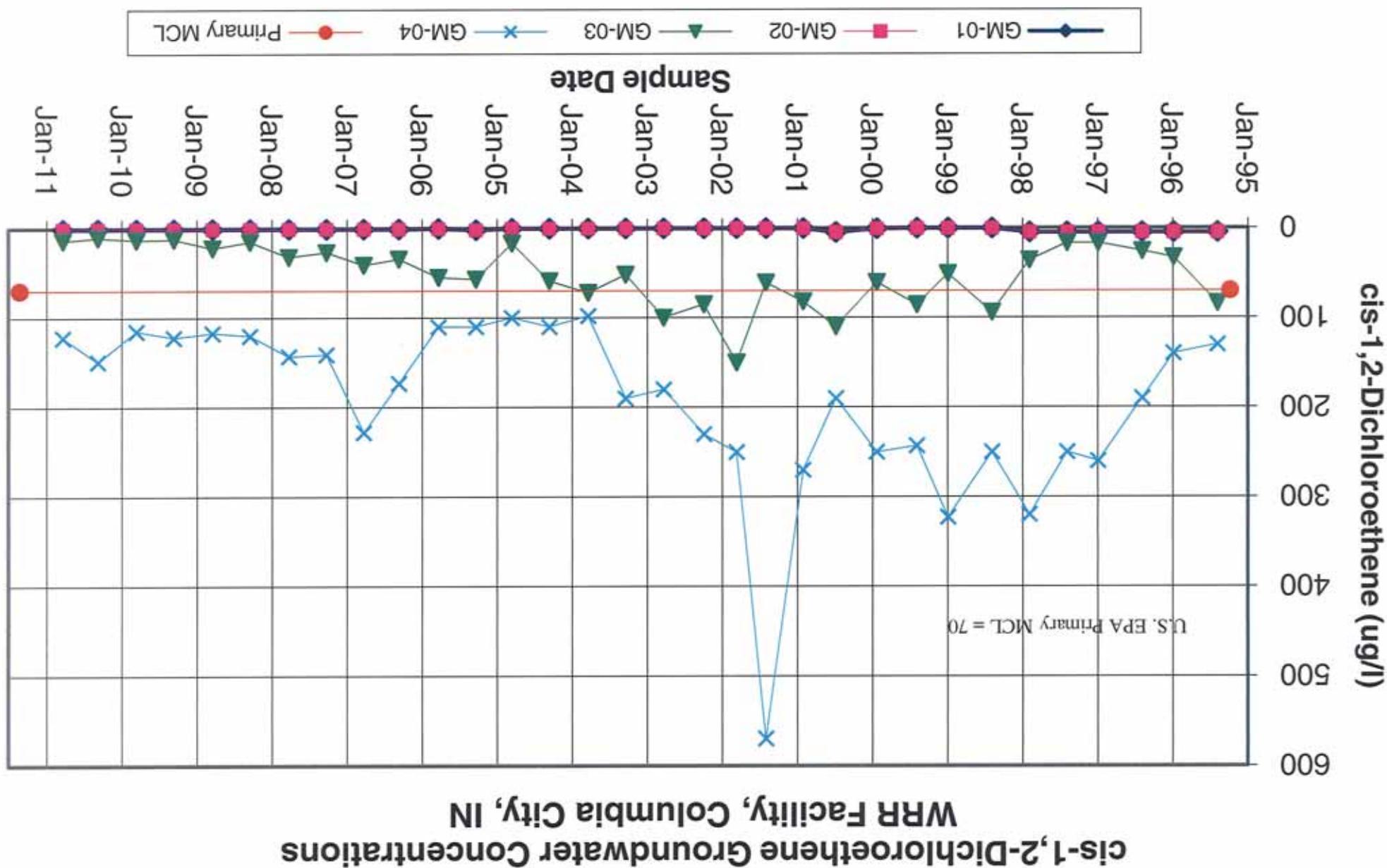


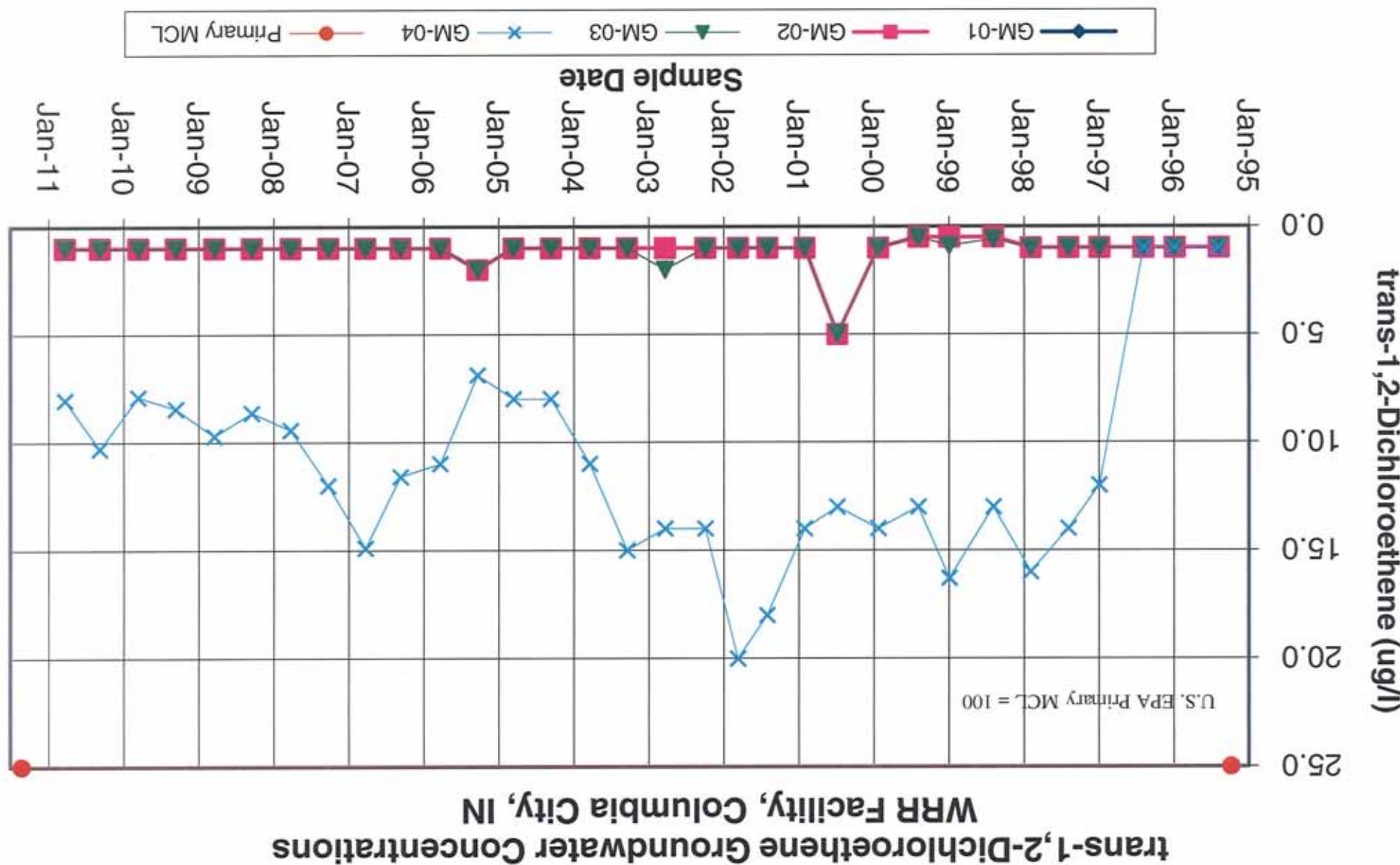


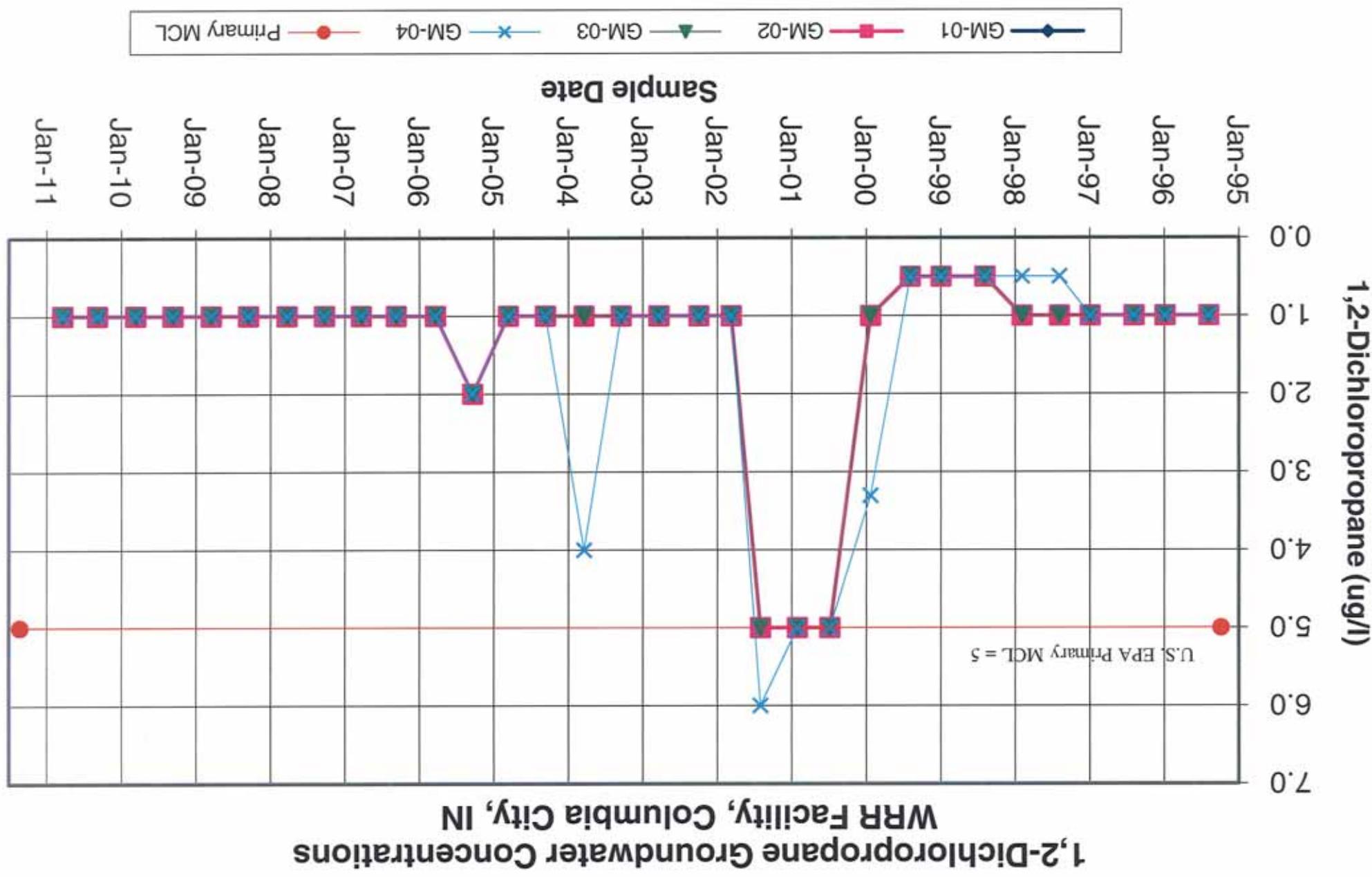


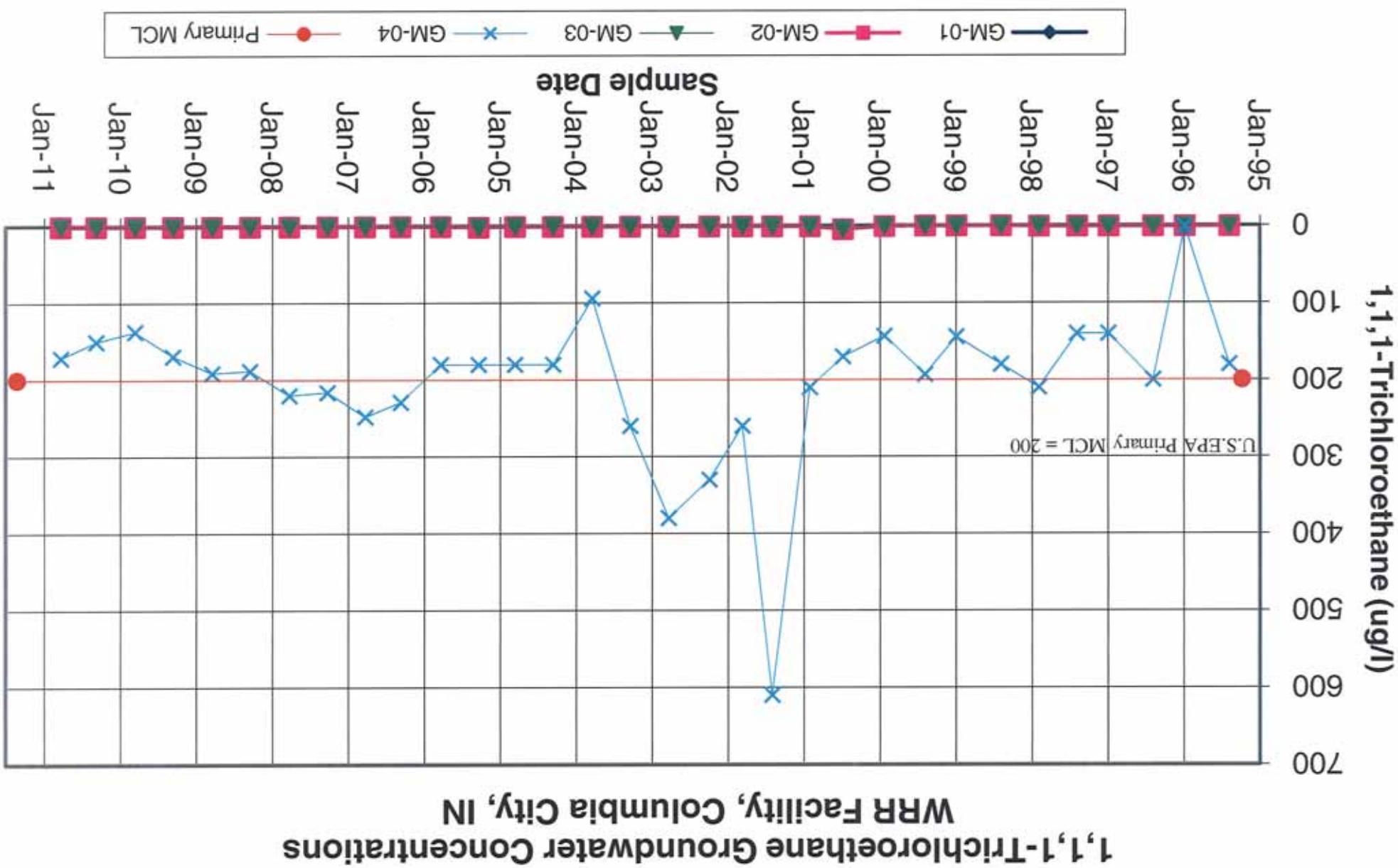


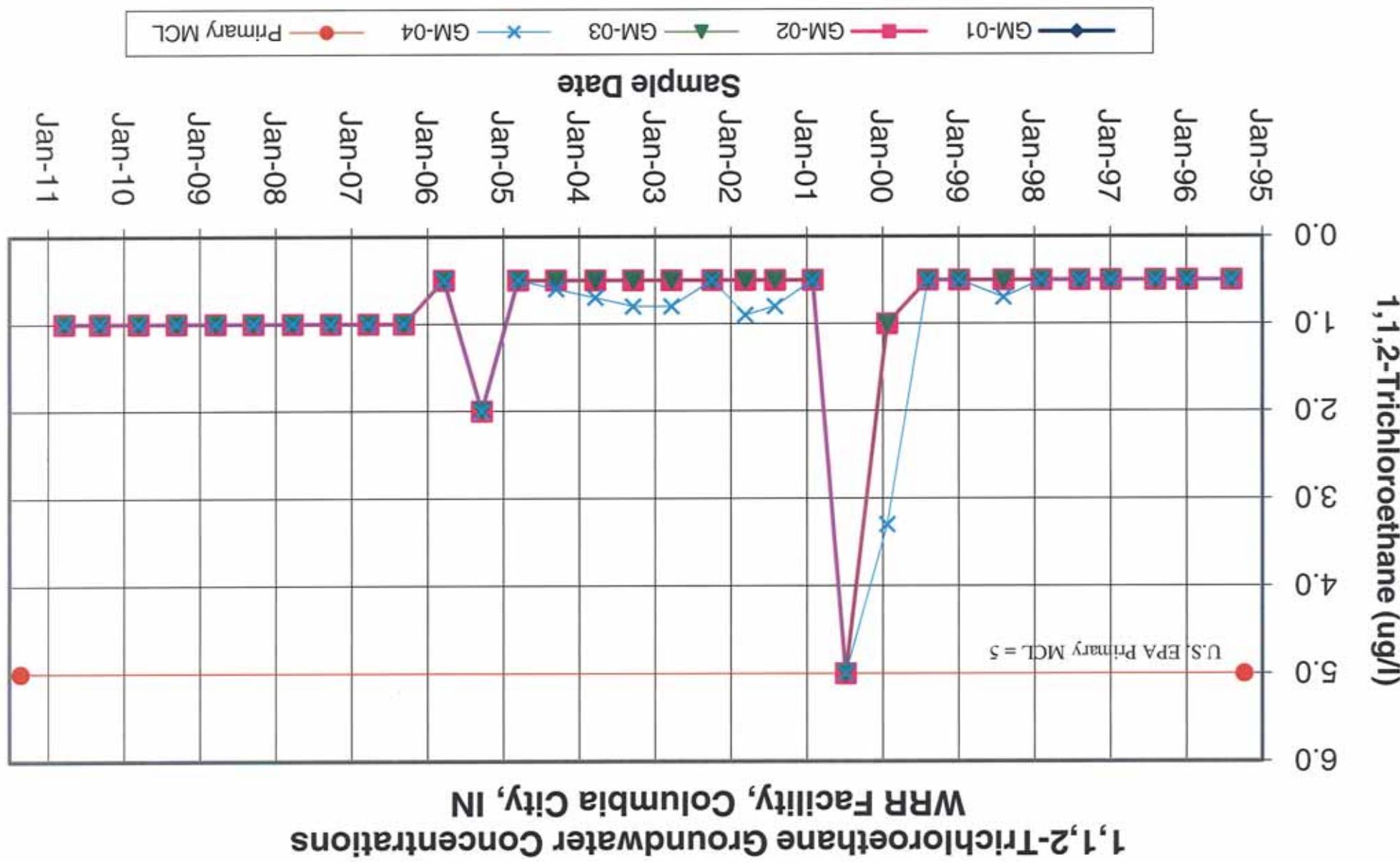


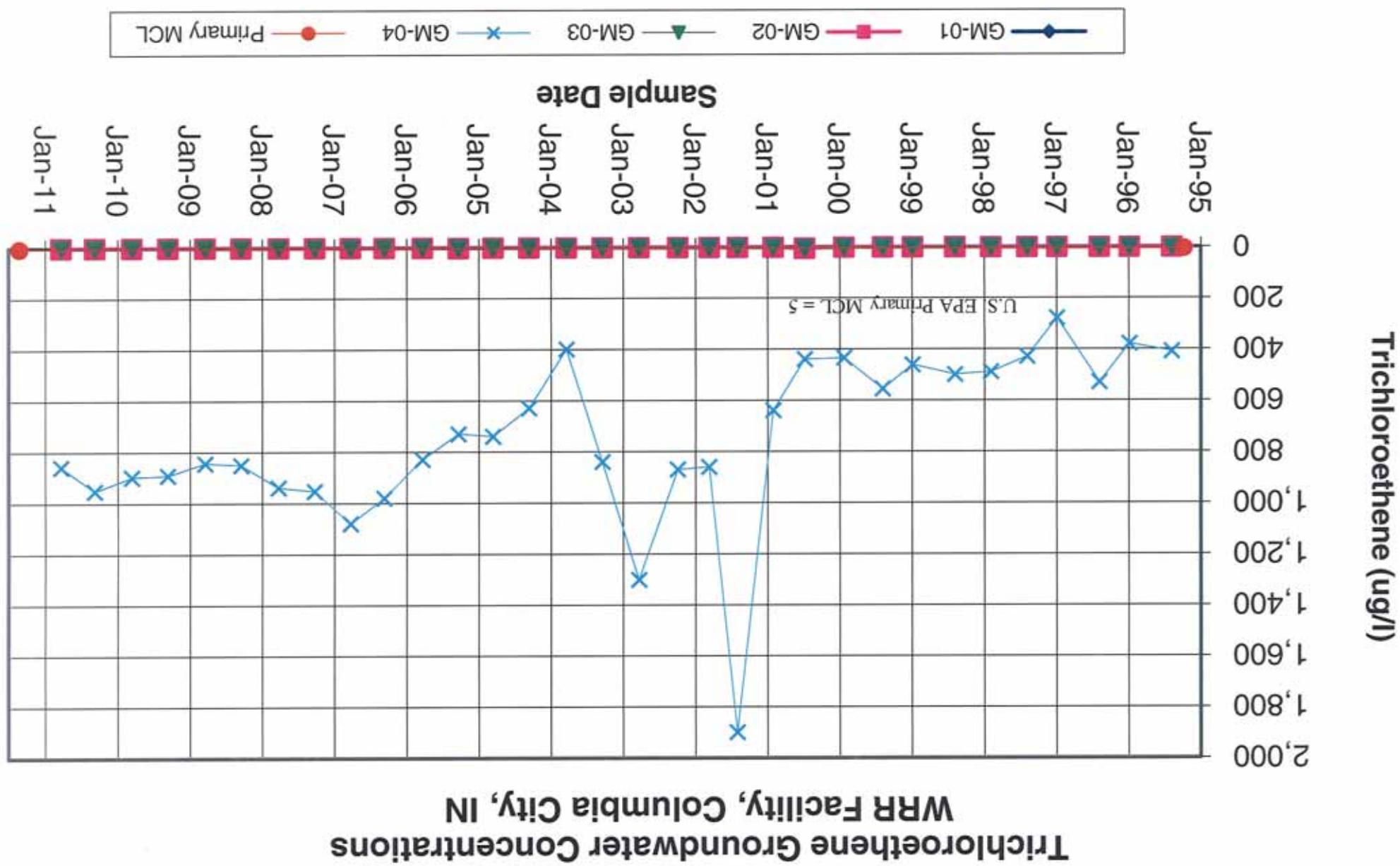


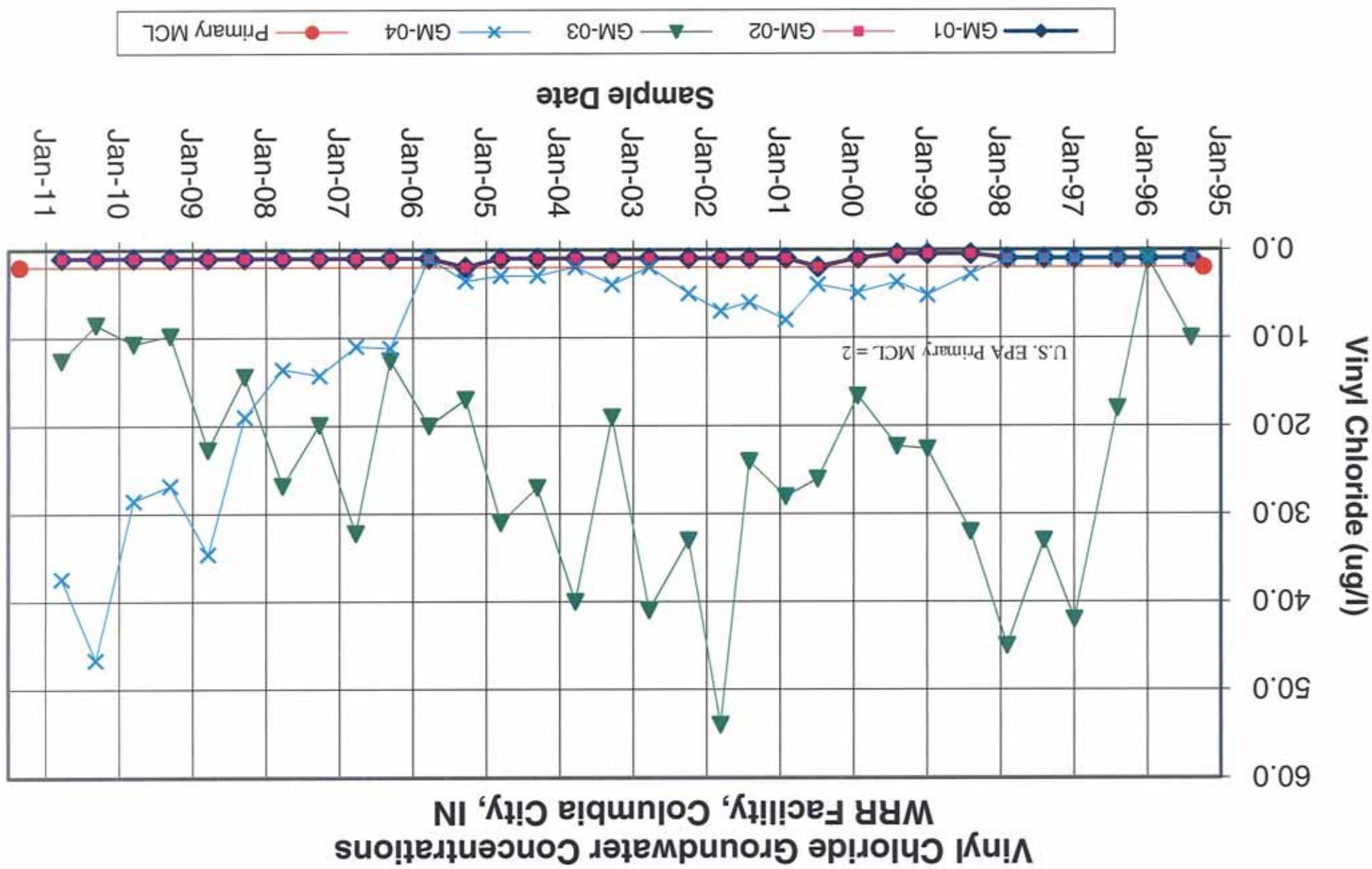












APPENDIX B

DATA VALIDATION REPORT

APPENDIX B

DATA VALIDATION REPORT
SEMI-ANNUAL PROGRESS REPORT 31

July through December 2010
Wayne Reclamation & Recycling

Groundwater, air, and associated quality control (QC) samples were collected from the Wayne Reclamation & Recycling Site in Columbia City, Indiana between July and December 2010. The water samples were analyzed by Pace Analytical Services, Inc. (Pace) of Indianapolis, Indiana for one or more of the following parameters: volatile organic compounds (VOCs) by United States Environmental Protection Agency (U.S. EPA) Method SW-846 8260B; dissolved metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) by U.S. EPA Method SW-846 6010B; and total cyanide by U.S. EPA Method 335.3. Additionally, air samples were analyzed for VOCs by Pace of Minneapolis, Minnesota by U.S. EPA Method TO-14.

Laboratory analytical results were evaluated in accordance with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Data Review (June 2008), U.S. EPA CLP NFG for Inorganic Data Review (October 2004), and the laboratory-specific quality control parameters for each analytical methods. The analytical data were reviewed and qualified based on the results of the data evaluation parameters and/or the QC sample results provided by the laboratory.

The following summarizes the review of the analytical data that did not meet the QC criteria per sample delivery group (SDG):

Air Samples

SDG 10133816 No comments

SDG 10135620 The laboratory indicated that the result for cis-1,2-dichloroethene exceeded the calibration range. The results for this compound should be considered estimated.

The LCS %Rs for 1,24-trichloroethane (240%), 1,2-dichlorobenzene (186%), and hexachloro-1,3-butadiene (283%) were above the quality control limits. Because these compounds were not detected in the investigative sample, qualifiers were not necessary.

SDG 10138495 The laboratory indicated that serial dilution was used to analyze the following compounds: cis-1,2-dichloroethene, methylene chloride, trichloroethene, and vinyl chloride. Qualifiers were not necessary.

SDG 10141681 According to the laboratory report, the secondary source verification criteria for the initial calibration were not met for 1,2,4,-trichlorobenzene and hexachloro-1,3-butadiene. The results for these compounds in samples AIREFF-FIELD DUP and SVE-G should be considered estimated.

SDG 10143661 The laboratory indicated that cis-1,2-DCE was analyzed by serial dilution.

The laboratory indicated that 1,2,4-trichlorobenzene result did not meet the secondary source verification criteria for the initial calibration and that this result should be considered estimated.

SDG 10145905 The laboratory indicated that cis-1,2-DCE, trichloroethene, and vinyl chloride were analyzed by serial dilution.

The laboratory indicated that the continuing calibration for THC was outside the acceptance limit. The results for THC should be considered estimated.

The concentrations of 1,2-dichloroethene, trichloroethene, and vinyl chloride in the sample used for MS/MSD analyses were greater than four times the spike amount. Therefore, the MS/MSD results for these compounds were not evaluated.

Groundwater System Samples

SDG 5039446 1,2,3-Trichlorobenzene, hexachloro-1,3-butadiene, and naphthalene were detected in the method blank associated with this SDG. These compounds were not detected in investigative samples. Therefore, qualifiers were not necessary.

The LCS %R for acrolein (20%) was below the quality control limits (30-170%). Although acrolein is not a site-specific compound of concern, the acrolein results for this SDG should be considered estimated.

The MS %R for bromoform (51%) was below the quality control limits (58-124%). Although bromoform is not a site-specific compound of concern, the bromoform results for this SDG should be considered estimated.

SDG 5040167 The LCS %R for acrolein (17%) was below the quality control limits (30-170%). Although acrolein is not a site-specific compound of concern, the acrolein results for this SDG should be considered estimated.

The sample used for MS/MSD analysis was not from this SDG. Therefore, the MS/MSD results were not evaluated.

SDG 5041508 No comments.

SDG 5042654 The LCS %Rs for dichlorodifluoromethane (178%) and vinyl acetate (158%) were above the quality control limits. These compounds were not detected in the investigative samples. Therefore, qualifiers were not necessary.

The MS/MSD %Rs for 1,1,2-trichloroethane (68% and 55%, respectively) were below the quality control limits (71-143%). Although this compound is not a site-specific compound of concern, the 1,1,2-trichloroethane results for this SDG should be considered estimated.

The MS %R for surfactants (180%) was above the quality control limits (33-130%). Surfactants were not detected in the investigative sample. Therefore, qualifiers were not necessary.

The MS/MSD %Rs for nitrogen (71% and 71%, respectively) were below the quality control limits (90-110%). The nitrogen results for this SDG should be considered estimated.

The MS/MSD %Rs for phosphorus (21% and -9%, respectively) were below the quality control limits (80-120%). The laboratory reported a “matrix interference” for this sample. The phosphorus results for this SDG should be considered estimated.

SDG 5043589 Naphthalene was detected in the method blank. This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

The LCS %R for acrolein (15%) was below the quality control limits (30-170%). Although acrolein is not a site-specific compound of concern, the acrolein results for this SDG should be considered estimated.

SDG 5044610 Naphthalene was detected in the method blank. This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

The MS %R for acrolein (196%) was above the quality control limits (30-170%). This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

Groundwater Monitoring Well Samples

SDG 5042758 The MS/MSD %Rs for acrolein (368% and 302%, respectively) were above the quality control limits (30-170%). Acrolein was not detected in the investigative sample. Therefore, qualifiers were not necessary.

SDG 5042761 The LCS %R for acrolein (28%) was below the quality control limits (30-170%). Although acrolein is not a site-specific compound of concern, the acrolein results for this SDG should be considered estimated.

The LCS %R for dichlorodifluoromethane (177%) was above the quality control limits (30-170%). This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

The MS %R for 1,1,2,2-tetrachloroethane (62%) was below the quality control limits (64-142%). Because the MSD %R was acceptable, qualifiers were not necessary.

The MSD %R for 1,1,2-trichloroethane (69%) was below the quality control limits (71-143%). Because the MS %R was acceptable, qualifiers were not necessary.

The MSD %R for cis-1,2-dichloroethene (61%) was below the quality control limits (65-132%). Because the MS %R was acceptable, qualifiers were not necessary.

The MS/MSD %Rs for trichloroethene (55% and 45%, respectively) were below the quality control limits (61-137%). The trichloroethene results for the spiked sample (MW-13S) should be considered estimated.

SDG 5042763 The MSD %R for aluminum (126%) was above the quality control limits (75-125%). Because the MS %R was acceptable, qualifiers were not necessary.

The sample concentrations for calcium, iron, and manganese were greater than four times the spike amount used for the MS/MSD analyses. Therefore, the MS/MSD results were not evaluated.

SDG 5042765 The LCS %R for acrolein (28%) was below the quality control limits (30-170%). Although acrolein is not a site-specific compound of concern, the acrolein results for this SDG should be considered estimated

The LCS %R for dichlorodifluoromethane (177%) was above the quality control limits (30-170%). This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

The MS %R for 1,1,2,2-tetrachloroethane (62%) was below the quality control limits (64-142%). Because the MSD %R was acceptable, qualifiers were not necessary.

The MSD %R for 1,1,2-trichloroethane (69%) was below the quality control limits (71-143%). Because the MS %R was acceptable, qualifiers were not necessary.

The MSD %R for cis-1,2-dichloroethene (61%) was below the quality control limits (65-132%). Because the MS %R was acceptable, qualifiers were not necessary.

The MS/MSD %Rs for trichloroethene (55% and 45%, respectively) were below the quality control limits (61-137%). The trichloroethene results for the spiked sample (MW-13S) should be considered estimated.

SDG 5042765 The LCS %R for acrolein (219%) was above the quality control limits (30-170%). This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

The LCS %R for vinyl acetate (165%) was above the quality control limits. This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

The MS/MSD %Rs for acrolein (356% and 307%, respectively) were above the quality control limits (30-170%). Because this compound was not detected in the investigative samples, qualifiers were not necessary.

The concentrations of 1,2-dichloroethene, trichloroethene, and vinyl chloride in the sample used for MS/MSD analyses were greater than four times the spike amount. Therefore, the MS/MSD results for these compounds were not evaluated.

Based on the results of this data validation, the data are considered useable and complete as qualified.

BRT
\\Usdet1s02\\J:\\01_INDUSTRIAL-OTHER\\3868-Wayne RR\\6-Reports\\SAPR 31\\04 - Appendices\\Appendix B - data valid rpt- Wayne Rec SAPR 31.doc

APPENDIX C

SUMMARY OF MAJOR FIELD ACTIVITIES JULY THROUGH DECEMBER 2010

APPENDIX C

SUMMARY OF MAJOR FIELD ACTIVITIES JULY THROUGH DECEMBER 2010

Wayne Reclamation & Recycling

Date	Description of Field Activities and Events as Provided by InSite
July 2010	<ul style="list-style-type: none">• Routine maintenance.• Mix batch of anti-scale solution.• Mobilize landscaping equipment.• Adjust air-stripper control parameters.
August 2010	<ul style="list-style-type: none">• Routine maintenance.• Check low-pressure in control air. Repair partly obstructed coalescing filter.• Check for water entering via SE area and SVE collection system.• Pump down knock-out tank and tank T-6.• Open taps in SVE piping to reduce vacuum.• Pump down tank T-6 several times.• Repair sump pump in SE area and SVE; repair anti-scale feeding system.
September 2010	<ul style="list-style-type: none">• Routine maintenance.• Check on tank T-6 high-high condition.• Pump down tank T-6; repair check-valve leak in SE Area sump; zero set FT-7.
October 2010	<ul style="list-style-type: none">• Routine maintenance.• Switch online blower to B-2 and start service on B-1.• Electrical service check at AC-2.
November 2010	<ul style="list-style-type: none">• Routine maintenance; Cleaned recovery well flow meters.• Clean pump at RW-3; repair RW-3 pitless• Repair electrical drop for RW-3; install electrical drop, motor and pump at RW-3; check running current and adjust phase angle monitor• Repair AC-2 air outlet; replace air coalescing filter.• Check phase angle control at RW-10
December 2010	<ul style="list-style-type: none">• Routine maintenance; install fitting on new filter at AC-2.• Complete motor lubrication at blower B-1; drain and refill bearing oil at B-1• Clean paddle and install new paddle and shaft for SEA flow• Adjust stripper control parameters• Adjust RW-8, RW-9, and RW-10 for better flow control• Clean pump at RW-5

APPENDIX D

HISTORICAL MONITORING DATA

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	SOUTHEAST AREA													
	BRANCHES A - F													
	AS-ON 1/9/96	AS-ON 2/15/96	AS-ON 2/16/96	AS-ON 2/18/96	AS-ON 11/25/96	AS-OFF 11/27/96	AS-ON 9/3/97	AS-OFF 9/5/97	AS-ON 11/18/97	AS-OFF 11/21/97	AS-ON 4/21/98 *	AS-OFF 4/28/98	AS-ON 10/14/98	AS-OFF 10/16/98
1,1-Dichloroethane	230	230	300	180	120	81	88	82	98	92	20	19	70	73
cis-1,2-Dichloroethene	9,600	6,800	6,600	6,400	5,300	3,700	2,900	3,000	4,400	4,300	830	1,000	3,300	3,500
trans-1,2-Dichloroethene	850	460	540	480	490	340	370	380	460	460	71	74	280	360
4-Ethyltoluene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12	<25	<25
Tetrachloroethene	670	470	470	470	450	370	370	370	240	220	56	100	450	270
1,1,1-Trichloroethane	1,300	810	770	700	520	340	280	290	270	290	47	51	280	190
Trichloroethene	9,100	8,600	7,200	7,100	4,000	3,000	2,800	2,800	3,800	3,500	330	540	2,500	2,900
1,2,4-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	13	<12	<25	<25
1,3,5-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12	<25	<25
Vinyl Chloride	<84	<72	240	230	61	<34	130	200	89	56	85	<12	<25	<25
Xylenes, Total	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	23	14	<25	<25
Soil Vapor Extraction Wells:	I - 40D													

Notes:

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging system (on or off).

* As of May 1, 1998, began to cycle operation of soil vapor extraction branches.

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

The soil vapor extraction (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and were restarted in April 2006.

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	SOUTHEAST AREA															
	BRANCHES A - F															
	AS-ON 4/26/99	AS-OFF 4/13/99	AS-ON 12/14/99	AS-OFF 12/21/99	AS-ON 4/18/00	AS-OFF 4/29/00	AS-ON 10/6/00	AS-OFF 10/10/00	AS-ON 4/27/01	AS-OFF 4/23/01	AS-ON 9/29/01 *	AS-OFF 10/31/01	AS-ON 4/23/02	AS-OFF 4/26/02	AS-ON 10/23/02	AS-OFF 10/28/02
1,1-Dichloroethane	14	5	47	38	17	29	49	32	<6.9	<140	<140	<130	14	10	<140	<130
cis-1,2-Dichloroethene	410	210	1,500	1,300	580	1,400	2,200	1,300	270	150	680	1,500	510	370	1,300	790
trans-1,2-Dichloroethene	40	22	180	160	59	130	160	130	NA	NA	NA	NA	NA	NA	NA	NA
4-Ethyltoluene	7	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	53	5	54	58	52	79	52	95	20	<140	<140	<130	47	42	<140	<130
1,1,1-Trichloroethane	90	6	100	87	56	74	93	75	29	<140	<140	<130	27	19	<140	<130
Trichloroethene	250	94	650	540	400	710	920	750	150	140	280	410	300	330	720	430
1,2,4-Trimethylbenzene	14	2	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140	<140	<130	<1.3	<0.64	<140	<130
1,3,5-Trimethylbenzene	<2	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140	<140	<130	<1.3	<0.64	<140	<130
Vinyl Chloride	12	15	180	29	12	<13	130	<8.2	60	<140	<140	<260	61	18	<140	<130
Xylenes, Total	29	5	<9.7	<7.8	<6.7	<13	<18	<8.2	<5.7	<140	<280	<260	<2.2	<1.1	<280	<270
Soil Vapor Extraction Wells:	1 - 40D															

Notes: * As of September 15, 2001, began cycling of two soil vapor extraction branches with weekly rotation of branches.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging system (on or off).

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

NA = Not analyzed.

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	SOUTHEAST AREA																	
	BRANCHES A - F																	
	AS-ON 4/15/03	AS-OFF 4/21/03	AS-ON 10/15/03	AS-OFF 10/18/03	AS-ON 4/19/04	AS-OFF 4/23/04	AS-ON 10/14/04	AS-OFF 10/19/04	AS-ON 4/19/05	AS-OFF 4/25/05	AS-ON 10/12/05	AS-OFF 10/12/05	AS-ON 4/8/06	AS-OFF 4/8/06	AS-ON 5/21/06	AS-OFF 5/28/06	AS-ON 10/24/06	AS-OFF 10/24/06
1,1-Dichloroethane	<130	<130	<150	<150	<13	<140	<140	<150	6.7	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8	22	<13.4
cis-1,2-Dichloroethene	190	470	390	340	790	160	330 (UB)	330 (UB)	742	742	430	400	449	458	567	392	811	570
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	< 0.7	< 13.7	< 130	< 130	64	75	86	50	122	92
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<130	<130	<150	<150	29	<140	<140	<150	19	40	< 130	< 130	26	22	38	34	36	34
1,1,1-Trichloroethane	<130	<130	<150	<150	21	<140	<140	<150	19	31	< 130	< 130	22	23	40	33	64	37
Trichloroethene	<130	270	260	240	390	<140	180 (UB)	180 (UB)	407	323	240	230	322	309	378	279	434	376
1,2,4-Trimethylbenzene	<130	<130	<150	<150	<13	<140	<140	<150	0.86	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8	<13.8	<13.4
1,3,5-Trimethylbenzene	<130	<130	<150	<150	<13	<140	<140	<150	< 0.66	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8	<13.8	<13.4
Vinyl Chloride	<130	<130	<150	<150	30	<140	<140	<150	< 0.69	< 13.4	< 130	< 130	31.2	<14.3	19.8	<14.8	<13.8	<13.4
Xylenes, Total	<270	<270	<460	<450	30	<140	<140	<150	1.8	< 21.4	< 270	< 270	<40.2	<42.9	<42.9	<44.4	<41.4	<40.2
Soil Vapor Extraction Wells:	1 - 40D																	

Notes: Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging (on or off).

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

NA = Not analyzed.

Southeast

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	ABOVEGROUND STORAGE TANK AREA												
	BRANCHES G and H ⁽¹⁾												
	1/11/96	11/25/96	9/3/97	11/18/97	4/21/98	10/16/98	4/21/99	11/22/99	4/18/00	10/2/00	4/23/01	11/2/01	4/23/02
1,1-Dichloroethane	39	270	11	6	<2	<2.0	<2.0	<2.0	9.1	10	1.3	4.6	0.77
cis-1,2-Dichloroethene	1,800	660	820	310	110	50	21	24	330	300	21	130	27
trans-1,2-Dichloroethene	120	63	59	24	4.8	2.2	<2.0	<2.0	28	27	NA	<0.57	NA
4-Ethyltoluene	190	<22	10	3	16	<2.0	4	2.1	<7.3	<6.1	NA	NA	NA
Tetrachloroethene	1,600	<22	460	67	21	6	2.8	<2.0	58	75	15	71	6.6
1,1,1-Trichloroethane	790	2,700	180	65	3.4	2	<2.0	<2.0	55	61	9.9	33	3.6
Trichloroethene	1,700	140	1,500	420	57	48	8.1	9	590	710	57	150	22
1,2,4-Trimethylbenzene	230	<22	12	4	22	<2.0	7.5	2.8	<7.3	<6.1	<0.71	<0.69	<0.69
1,3,5-Trimethylbenzene	120	<22	20	4	6.3	<2.0	2.2	<2.0	<7.3	<6.1	<0.71	<0.69	<0.69
Vinyl Chloride	130	<22	<8.4	22	7	<2.0	2.3	3.6	<7.3	<6.1	<0.74	2.5	0.92
Xylenes, Total	55	<22	25	46	57	<2.0	18	2.1	<7.3	31	3.49	41	2.79
Soil Vapor Extraction Wells:	41 - 55												

Notes:

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

⁽¹⁾ Branch H operations suspended as of the beginning of October 2002.

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	ABOVEGROUND STORAGE TANK AREA																		
	BRANCH G (EAST BRANCH)																		
	10/23/02	12/18/02 *	4/17/03	10/15/03	4/19/04	10/19/04	4/19/05	10/12/05	4/7/06	5/30/06	10/20/06	4/23/07	10/18/07	4/14/08	10/17/08	4/20/09	10/15/09	4/21/10	10/27/10
1,1-Dichloroethane	<140	<140	<130	<150	<13	5.7	< 13.2	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	<0.67	1.9	<12.5	<12.5
cis-1,2-Dichloroethene	<140	580	190	<150	160	170 (UB)	65	290	805	132	222	11	33	<13.4	362	13	37	23	47
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	< 14.1	< 140	<13.8	<14.3	15	<3.5	<14.3	<13.4	50	<0.67	2.1	<12.5	<12.5
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5
Tetrachloroethene	<140	<140	<130	<150	23	27	22	< 140	29	28	51	7.5	<14.3	<13.4	32	28	13	<12.5	<12.5
1,1,1-Trichloroethane	<140	<140	<130	<150	<12	17	74	< 140	<13.8	<14.3	17	<3.4	<14.3	<13.4	18	<0.67	2.9	<12.5	<12.5
Trichloroethene	180	440	280	260	360	350 (UB)	105	260	197	183	380	28	52	<13.4	559	9.5	98.9	40.3	97.7
1,2,4-Trimethylbenzene	<140	<140	<130	<150	<13	4.0	< 13.2	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	2.4	<0.67	<12.5	<12.5
1,3,5-Trimethylbenzene	<140	<140	<130	<150	<13	1.2	< 13.2	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	1.6	<0.67	<12.5	<12.5
Vinyl Chloride	<140	<140	<130	<150	<14	18.4 (UB)	< 13.8	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	<0.67	<0.67	<12.5	<12.5
Xylenes, Total	<290	<290	<270	<450	47	9.3	< 22.1	< 290	<13.8	<14.3	<13.8	<3.4	<42.9	<40.2	<40.2	1.0	<2.0	<32.5	<32.5
Soil Vapor Extraction Wells:	41 - 43, 50, and 53 - 58																		

Notes: Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

⁽¹⁾ Branch H operations suspended as of the beginning of October 2002.

< = Not detected greater than the reporting limit provided.

* Additional sampling following the completion and connection of new Soil Vapor Extraction Wells 56, 57, and 58.

NA = Not analyzed.

Bold = Analyte detected greater than the laboratory reporting limit.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-1D (Southeast Area)															PRG (µg/L)
		8/1988	6/7/96	11/6/96	6/12/97	10/14/98	10/13/99	10/2/00	10/31/01	10/25/02	10/15/03	10/20/04	10/12/05	10/18/06	10/17/07	10/17/08	10/13/09
VOCs (µg/L)																	
Acetone		ND	ND	NA	NA	NA	ND	ND	ND	<20.0	<20.0	<20	<20	<20	<20	<20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	NA	<2.0	<2	<2	<2	<2	<2	<2	--
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	<12.5	<20.0	<20	<20	<20	<20	<20	<20	--
n-Butylbenzene		ND	ND	NA	NA	NA	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
Carbon Disulfide		ND	ND	NA	NA	NA	ND	ND	<1.0	<20.0	<20	<20	<20	<20	<20	<20	768
Chloroethane		ND	ND	NA	ND	ND	ND	ND	<5.0	<2.0	<2	<2	<2	<2	<2	<2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	5	<1	<1	<1	0.274
Dibromomethane		ND	ND	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.0167
cis-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	70
trans-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	100
1,2-Dichloroethene, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	700
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	ND	ND	ND	<12.5	<20.0	<20	<20	<20	<20	<20	<20	487
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.314
Trichloroethylene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	2.54
1,2,4-Trimethylbenzene		ND	ND	NA	NA	ND	ND	ND	<1.0	NA	<5	<5	<5	<5	<5	<5	--
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1.0	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<2	<2	828
TOTAL VOCs		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Metals (mg/L)																	
Arsenic, Dissolved	0.0059	0.005	ND	ND	ND	ND	ND	ND	<0.100	<0.0100	<0.01	<0.01	<0.1	<0.1	<0.10	<0.10	--
Barium, Dissolved	0.132	0.13	0.13	0.12	0.16	0.68	0.14	0.18	0.226	0.147	0.140	0.175	0.170	0.160	0.230	0.14	0.14
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00500	<0.001	<0.001	<0.03	<0.03	<0.03	<0.03	--
Chromium, Dissolved total	ND	ND	ND	ND	0.013	ND	ND	ND	<0.040	0.0207	<0.01	<0.01	<0.04	<0.04	<0.04	<0.04	--
Cyanide, Total	0.009	ND	ND	ND	ND	ND	ND	ND	<0.005	<0.00500	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	<0.005	<0.005	<0.08	<0.08	<0.08	<0.08	--
Nickel, Dissolved	ND	ND	ND	0.051	ND	ND	ND	ND	0.012	0.013	0.0117	<0.05	<0.05	0.16	0.1	0.013	<0.01
Zinc, Dissolved	0.013	0.06	ND	0.025	0.031	0.13	ND	0.068	0.072	0.220	<0.0200	0.0358	<0.020	0.052	<0.05	<0.05	<0.05

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

ND = Not detected greater than the method detection limit.

NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-3S (Southeast Area)										PRG ($\mu\text{g/L}$)	
		3/1/88	8/1/88	11/29/95	8/27/96	11/6/96	6/13/97	10/14/98	10/13/99	10/2/00	10/31/01		
VOCs ($\mu\text{g/L}$)													
Acetone		ND	ND	NA	NA	NA	NA	ND	ND	ND	<20.0	3,650	
Benzene		ND	1.1	ND	ND	ND	ND	ND	ND	ND	<1.0	0.617	
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--	
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	<12.5	--	
n-Butylbenzene		ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--	
Carbon Disulfide		ND	2.3	NA	NA	NA	NA	ND	ND	ND	<1.0	768	
Chloroethane		ND	ND	ND	NA	ND	ND	ND	ND	ND	<5.0	--	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	0.274	
Dibromomethane		ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--	
1,1-Dichloroethane		ND	23	ND	ND	1.5	ND	ND	ND	ND	<1.0	973	
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--	
1,1-Dichloroethylene		ND	16	ND	ND	1.9	ND	ND	ND	ND	<1.0	0.0167	
cis-1,2-Dichloroethylene		NA	NA	NA	3,500	2,600	1,200	1,100	1,400	840	733	269	70
trans-1,2-Dichloroethylene		NA	NA	NA	110	92	45	54	33	38	43	22	100
1,2-Dichloroethylene, Total		24,000	6,900	2,200	3,610	2,692	1,245	1,154	1,433	878	776	291	(170)
1,2-Dichloropropane		ND	8.4	ND	ND	3.7	ND	ND	ND	ND	2	<1.0	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	700
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	487
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Toluene		ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	0.314
Trichloroethylene		ND	1.1	ND	ND	ND	ND	ND	ND	ND	5	2	2.54
1,2,4-Trimethylbenzene		ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Vinyl Chloride		1,300	430	380	400	260	90	120	310	67	3	2	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs		25,300.0	7,385.3	2,580	4,010	2,959.1	1,335	1,274	1,743	945	786	295	--
Metals (mg/L)													
Arsenic, Dissolved		0.015	0.0234	0.005	ND	ND	ND	0.011	ND	ND	<0.100	--	
Barium, Dissolved		0.306	0.32	0.08	0.04	ND	ND	0.048	0.28	0.032	0.041	<0.020	--
Cadmium, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	--
Cyanide, Total		0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	--
Lead, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved		ND	0.0151	ND	ND	ND	ND	ND	ND	0.013	ND	0.020	--
Zinc, Dissolved		ND	0.0126	ND	ND	ND	ND	ND	0.27	ND	ND	<0.050	--

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

2003 and subsequent data were validated to Level II.

October 2002 and October 2004 - dry conditions at the site; inadequate groundwater volume.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-4S (Recovery Well RW-4 Area)																	
		8/1/88	7/23/92	11/28/95	8/27/96	6/12/97	11/18/97	4/21/98	10/15/98	4/12/99	10/13/99	5/4/00	10/2/00	4/19/01	10/31/01	4/23/02	10/23/02	4/16/03	10/15/03
VOCs (µg/L)																			
Acetone		ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	
n-Butylbenzene		ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Carbon Disulfide		ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0	
Chloroform		0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Dibromomethane		ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
1,1-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
cis-1,2-Dichloroethylene		ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
trans-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
1,2-Dichloroethene, Total		ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Toluene		ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Trichloroethylene		ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
1,2,4-Trimethylbenzene		ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
Vinyl Chloride		2	1	ND	ND	ND	ND	12	15	17	29	33	23	13	7	6	15	18	25
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	
TOTAL VOCs		2.7	1	ND	16.6	ND	ND	12	15	17	29	33	23	13	7	6	15	18	25
Metals (mg/L)																			
Arsenic, Dissolved		NA	ND	0.006	ND	ND	ND	ND	ND	0.0082	ND	0.0081	ND	ND	ND	ND	<0.10	<0.100	
Barium, Dissolved		NA	0.159	0.13	0.11	0.67	0.28	0.48	0.3	0.49	0.58	0.79	1.1	1.1	0.26	0.26	0.35	0.219	0.230
Cadmium, Dissolved		NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030	
Chromium, Dissolved total		NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040	
Cyanide, Total		NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	0.0071	
Lead, Dissolved		NA	ND	ND	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	<0.080	<0.080	
Nickel, Dissolved		NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.010	<0.010	
Zinc, Dissolved		NA	0.035	0.02	ND	0.036	ND	ND	0.023	0.025	ND	ND	0.022	ND	ND	0.056	<0.050	<0.050	

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

(J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-4S (Recovery Well RW-4 Area)													PRG ($\mu\text{g/L}$)	
		4/20/04	10/19/04	4/19/05	10/13/05	4/26/06	10/18/06	4/17/07	10/17/07	4/14/08	10/16/08	4/20/09	10/13/09	4/20/10	10/20/10	
VOCs ($\mu\text{g/L}$)																
Acetone		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	3,650	
Benzene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.617	
Bromomethane		<2.0	<2.0	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	
2-Butanone (MEK)		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	--	
n-Butylbenzene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	
Carbon Disulfide		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	768	
Chloroethane		<2.0 (J)	<2.0	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	
Chloroform		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.274	
Dibromomethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	973	
1,2-Dichloroethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethylene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.0167	
cis-1,2-Dichloroethylene		68	<1.0	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	70	
trans-1,2-Dichloroethylene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	100	
1,2-Dichloroethene, Total		68	<1.0	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	(170)	
1,2-Dichloropropane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.25	
Ethylbenzene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	700	
4-Methyl-2-pentanone (MIBK)		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	487	
Tetrachloroethene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.43	
Toluene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1,000	
1,1,1-Trichloroethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	200	
1,1,2-Trichloroethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.314	
Trichloroethylene		73	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.54	
1,2,4-Trimethylbenzene		NA	NA	<5	<5	<5	NA	NA	NA	<5	<5	<5	<5	<5	--	
Vinyl Chloride		26	12	8.8	7.2	8.4	5.0	5.2	<1	3.6	3.8	7.2	2.3	<1	0.0283	
Xylenes, Total		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	828	
TOTAL VOCs		167	12	8.8	8.2	8.4	5.0	5.2	0	3.6	3.8	7.2	2.3	0	0	--
Metals (mg/L)																
Arsenic, Dissolved		0.0201	0.0126	0.0173	0.0173	<0.100	0.0105	<0.100	<0.100	<0.100	<0.100	<0.100	<0.1	<0.1	<0.1	--
Barium, Dissolved		0.228	0.194	0.194	0.207	0.140	0.131	0.170	0.140	0.160	0.160	0.092	0.12	0.12	0.18	--
Cadmium, Dissolved		<0.005	<0.00100	<0.001	<0.001	<0.001	<0.001	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	--
Chromium, Dissolved total		<0.005	<0.0100	<0.01	<0.01	<0.01	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	--
Cyanide, Total		<0.005	<0.00500	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved		0.00597	<0.00500	<0.005	<0.005	<0.005	<0.005	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--
Nickel, Dissolved		<0.010	<0.0500	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Zinc, Dissolved		0.0233	0.025	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

(J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-7S (Recovery Well RW-4 Area)																	PRG (µg/L)	
		3/1/88	8/1/88	11/29/95	8/27/96	11/6/96	6/12/97	10/15/98	10/13/99	10/2/00	10/30/01	10/23/02	10/15/03	10/19/04	10/12/05	10/18/06	10/17/07	10/16/08	10/13/09	
VOCs (µg/L)																				
Acetone		ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide		ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	768
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	0.274
Dibromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		ND	23	7.4	10	7.4	5.1	ND	ND	3	3	5	4	3	3	< 1	< 1	< 1	973	
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	2.4	< 1	< 1	0.0167
cis-1,2-Dichloroethene		NA	NA	1,100	980	780	640	87	96	120	187	237	344	330	200	280	155	175	150	427
trans-1,2-Dichloroethene		NA	NA	59	74	55	48	23	10	12	21	21	33	29	18	23	17	20	16	59
1,2-Dichloroethene, Total		2,600	1,900	1,159	1,054	855	688	110	106	132	208	258	377	359	218	303	172	195	166	486
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	487
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	0.314
Trichloroethylene		ND	ND	3	92	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	2.54
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	--
Vinyl Chloride		ND	1	ND	ND	ND	ND	ND	6	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 2	< 2	828
TOTAL VOCs		2,600	1,924	1,170	1,156	862	693	110	112	132	211	261	382	363	221	306	172	197	166	486
Metals (mg/L)																				
Arsenic, Dissolved		0.005	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.100	0.0118	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	--
Barium, Dissolved		0.286	0.191	0.17	0.12	0.16	0.2	0.77	0.22	0.17	0.202	0.135	0.125	0.174	0.149	0.14	0.084	0.089	0.06	
Cadmium, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	--
Cyanide, Total		ND	0.016	0.095	ND	ND	ND	ND	ND	ND	ND	ND	0.0060	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved		ND	ND	ND	0.0099	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved		ND	ND	ND	0.06	ND	ND	ND	ND	ND	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved		ND	0.0263	ND	0.02	ND	ND	ND	0.22	ND	ND	ND	<0.050	0.0272	< 0.02	< 0.02	< 0.05	< 0.05</		

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-9S (Aboveground Storage Tank Area)																	
		3/1/88	8/1/88	7/24/92	11/7/95	8/27/96	6/12/97	11/18/97	4/21/98	10/15/98	4/12/99	10/20/99	5/4/00	10/2/00	4/19/01	10/30/01	4/23/02	10/23/02	4/16/03
VOCs (µg/L)																			
Acetone		ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<20.0						
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
2-Butanone (MEK)		ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5
n-Butylbenzene		ND	ND	ND	4.2	ND	ND	NA	ND	ND	ND	ND	<1.0						
Carbon Disulfide		ND	0.59	ND	NA	NA	NA	NA	ND	ND	ND	ND	<1.0						
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	<1.0
Dibromomethane		ND	ND	NA	1.8	ND	ND	NA	ND	ND	ND	ND	<1.0						
1,1-Dichloroethane		ND	8.3	ND	18	ND	13	ND	16	17	12	5.5	59	13	ND	1.5	1.7	3.9	4.2
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1-Dichloroethylene		ND	92	ND	56	ND	15	76	17	51	13	18	67	63	ND	5	8	38	42
cis-1,2-Dichloroethylene		NA	NA	NA	30,000	24,000	18,000	NA	10,000	19,000	8,800	NA	43,000	37,000	5,400	3,360	3,600	18,300	16,200
trans-1,2-Dichloroethene		NA	NA	NA	140	ND	200	NA	190	170	95	NA	350	210	ND	75	63	122	145
1,2-Dichloroethene, Total		33,000	32,000	23,000	30,140	24,000	18,200	42,390	10,190	19,170	8,895	8,003	43,350	37,210	5,400	3,435	3,663	18,422	16,345
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
4-Methyl-2-pentanone (MIBK)		ND	2.2	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5						
Tetrachloroethylene		ND	27	ND	36	ND	78	220	280	250	720	67	37	97	ND	28	46	64	59
Toluene		ND	21	ND	ND	ND	ND	ND	9	10	22	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1,1-Trichloroethane		ND	9.9	ND	ND	ND	ND	ND	13	21	13	ND	6	7	ND	1	3	5	3
1,1,2-Trichloroethane		ND	ND	ND	3	ND	ND	ND	8	12	ND	ND	6	ND	ND	ND	ND	2	
Trichloroethylene		18,000	18,000	9,700	17,000	28,000	24,000	67,000	25,000	12,000	16,000	5,800	5,800	21,000	16,000	4,590	9,300	6,470	8,180
1,2,4-Trimethylbenzene		ND	ND	NA	4.3	ND	ND	NA	ND	ND	6	ND	ND	ND	ND	ND	ND	ND	<1.0
Vinyl Chloride		ND	480	340	1,100	680	200	380	59	ND	72	140	260	140	ND	3	4	122	403
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	ND	ND	ND	ND	ND	ND	<1.0
TOTAL VOCs		51,000	50,641	33,040	48,363	52,680	42,506	110,066	35,592	31,531	25,774	14,034	49,585	58,530	21,400	8,064	13,025	25,125	25,038
Metals (mg/L)																			
Arsenic, Dissolved		0.008	0.0106	0.011	0.01	0.006	ND	ND	ND	ND	0.026	ND	0.0051	ND	ND	ND	ND	ND	<0.10
Barium, Dissolved		0.181	0.139	0.144	0.11	0.04	ND	ND	0.035	0.079	0.04	0.059	0.08	0.055	0.027	0.053	0.027	0.121	0.089
Cadmium, Dissolved		ND	ND	271	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030
Chromium, Dissolved total		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0052	ND	ND	ND	ND	ND	ND	ND	<0.040
Cyanide, Total		0.03	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005
Lead, Dissolved		ND	ND	ND	ND	0.0031	ND	ND	0.042	ND	ND	0.0026	ND	ND	ND	ND	0.15	ND	<0.080
Nickel, Dissolved		ND	0.0106	ND	ND	ND	ND	ND	ND	ND	0.027	ND	0.032	0.0073	0.01	0.013	0.022	0.018	
Zinc, Dissolved		ND	0.0212	0.015	ND	ND	0.023	0.03	ND	ND	0.062	ND	ND	ND	ND	ND	ND	ND	<0.050

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)

Metals reported in milligrams per liter (mg/L)

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date

2003 and subsequent data were validated to Level II

(J) = estimated.

-- = No PRG assigned.</p

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-9S (Aboveground Storage Tank Area)													PRG (µg/L)		
		10/15/03	4/20/04	10/19/04	4/19/05	10/13/05	4/26/06	10/18/06	4/17/07	10/17/07	4/14/08	10/14/08	4/22/09	10/13/09	4/10/10		
VOCs (µg/L)																	
Acetone		<20.0	<20	<20	< 20	< 100	< 100	< 10000	< 2000	< 2000	< 200	< 20	< 20	< 20	< 200	3,650	
Benzene		<1.0	1.4	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 1	< 10	0.617	
Bromomethane		NA	<2.0	<2.0	< 2	< 10	< 10	< 1000	< 1000	< 1000	< 100	< 2	< 2	< 2	< 20	--	
2-Butanone (MEK)		<12.5	<20	<20	< 20	< 100	< 100	< 10000	< 2000	< 2000	< 200	< 20	< 20	< 200	< 200	--	
n-Butylbenzene		<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 10	< 1	< 1	< 10	--	
Carbon Disulfide		<1.0	<20	<20	< 20	< 100	< 100	< 10000	< 2000	< 2000	< 200	< 20	< 20	< 200	< 200	768	
Chloroethane		<5.0	<2.0 (J)	<2.0	< 2	< 10	< 10	< 1000	< 1000	< 1000	< 100	< 2	< 2	< 2	< 20	--	
Chloroform		<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	0.274	
Dibromomethane		<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	--	
1,1-Dichloroethane		<1.0	16	2.3	1.2	20	< 1	< 100	< 100	< 100	< 10	1.7	< 1	3.2	< 10	973	
1,2-Dichloroethane		<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	--	
1,1-Dichloroethylene		<1.0	94	10	7	150	11	< 500	< 100	134	< 10	15	17	28	< 10	0.0167	
cis-1,2-Dichloroethylene		29,400	35,000	5,300	3,700	55,000	7,100	24,000	9,020	61,000	1,040	6,910	6,930	13,900	13,200	15,800	70
trans-1,2-Dichloroethene		252	310	84	36	390 (J)	78	< 500	< 100	< 100	< 10	85	48	181	105	227	100
1,2-Dichloroethylene, Total		29,652	35,310	5,384	3,736	55,390	7,178	24,000	9,020	61,000	1,040	6,995	6,978	14,081	13,305	16,027	(170)
1,2-Dichloropropane		3	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	1.25	
Ethylbenzene		<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	700	
4-Methyl-2-pentanone (MIBK)		<12.5	<20	<20	< 20	< 100	< 100	< 10000	< 2000	< 2000	< 200	< 20	< 20	< 200	< 200	487	
Tetrachloroethylene		106	180	33	12	190	34	< 500	< 100	< 100	< 10	5.5 J	12	1.8	< 10	< 10	1.43
Toluene		2	4	<1.0	< 1	6	< 1	< 100	< 100	< 100	< 10	< 1	< 1	< 10	< 10	1,000	
1,1,1-Trichloroethane		10	11	1	2	10	1	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	200	
1,1,2-Trichloroethane		5	5	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	0.314	
Trichloroethylene		32,200	39,000	6,600	4,100	49,000	7,100	13,000	5,640	25,900	524	1,490	2,360	787	989	1,020	2.54
1,2,4-Trimethylbenzene		<1.0	NA	NA	< 5	< 25	< 25	< 2500	NA	< 500	< 50	< 5	< 5	< 5	< 50	< 50	--
Vinyl Chloride		396	220	38	16	420 (J)	26	< 500	135	157	< 10	106	139	257	218	87	0.0283
Xylenes, Total		<1.0	3	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 10	< 10	828	
TOTAL VOCs		62,373	74,845	12,068	7,874	104,766	14,350	37,000	14,795	87,191	1,564	8,613	9,506	15,158	14,512	17,134	--
Metals (mg/L)																	
Arsenic, Dissolved		<0.100	<0.100	<0.0100	< 0.01	0.0103	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	
Barium, Dissolved		0.048	0.0749	0.09	0.0674	0.102	0.0775	0.0669	0.078	0.071	0.046	0.079	0.05	0.077	0.052	0.065	--
Cadmium, Dissolved		<0.030	<0.005	<0.00100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total		<0.040	<0.005	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total		<0.005	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	0.15	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved		<0.080	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved		0.020	0.0169	<0.0500	< 0.05	< 0.05	0.0103	0.0132	< 0.01	0.01	< 0.01	0.012	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved		<0.050	<0.020	<													

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-10S (Southeast Area)																	
		3/1/88	8/1/88	7/23/92	11/8/95	8/27/96	11/18/97	4/21/98	10/15/98	4/12/99	10/13/99	5/4/00	10/2/00	4/19/01	10/31/01	4/23/02	10/25/02	4/16/03	10/15/03
VOCs (µg/L)																			
Acetone		ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0
Benzene		ND	7	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Bromomethane		ND	ND	ND	4.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5
n-Butylbenzene		ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	4.5
Carbon Disulfide		ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Chloroethane		ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Dibromomethane		ND	ND	NA	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1-Dichloroethane		630	140	91	ND	ND	ND	ND	28	6.3	7.9	ND	5.7	ND	ND	1.9	5.1	1.1	<1.0
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1-Dichloroethylene		ND	20	ND	ND	ND	ND	ND	ND	6.8	ND	ND	ND	ND	ND	1.4	2.6	<1.0	<1.0
cis-1,2-Dichloroethylene		NA	NA	NA	37,000	15,000	NA	5,300	3,300	7,900	6.8	3,600	3,400	1,900	118	2,980	5,250	44	1,130
trans-1,2-Dichloroethylene		NA	NA	NA	440	350	NA	100	170	200	12,000	170	100	130	6.2	162	148	47	81
1,2-Dichloroethylene, Total		56,000	26,000	8,700	37,440	15,350	8,140	5,400	3,470	8,100	12,007	3,770	3,500	2,030	124.2	3,142	5,398	91	1,211
1,2-Dichloropropane		ND	ND	ND	6.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	<1.0	<1.0
Ethylbenzene		ND	4	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Toluene		ND	3,500	9,000	270	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Trichloroethylene		ND	2	ND	5	70	ND	ND	11	ND	ND	ND	ND	ND	ND	3.4	4.3	1.3	1.9
1,2,4-Trimethylbenzene		ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Vinyl Chloride		5,500	2,800	3,100	2,700	650	370	130	1,000	320	700	ND	120	ND	46.6	129	122	76	
Xylenes, Total		ND	28	96	21.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
TOTAL VOCs		62,130	32,501	20,987	40,456	16,120	8,510	5,530	4,509	8,426	12,722	3,770	3,626	2,030	124.2	3,195	5,540	215	1,293
Metals (mg/L)																			
Arsenic, Dissolved		0.009	ND	ND	0.006	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.10	<0.100	
Barium, Dissolved		0.239	0.0537	0.137	0.04	0.04	0.062	ND	0.032	0.023	0.36	0.068	0.033	0.047	0.064	0.061	NA	0.035	<0.020
Cadmium, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.030	<0.030	
Chromium, Dissolved total		0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.040	<0.040	
Cyanide, Total		0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0094	ND	0.037	NA	<0.005	0.011
Lead, Dissolved		ND	ND	ND	ND	0.0028	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	NA	<0.080	<0.080
Nickel, Dissolved		ND	ND	0.021	ND	ND	0.021	ND	ND	ND	ND	ND	0.009	0.0052	0.012	ND	NA	0.035	0.017
Zinc, Dissolved		ND	0.0089	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	NA	<0.050	<0.050	

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2002 - dry conditions; VOC only.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-10S (Southeast Area)										PRG ($\mu\text{g/L}$)
		4/20/04	10/22/04	4/19/05	10/13/05	4/26/06	4/17/07	10/17/07	4/14/08	4/20/09	4/20/10	
VOCs ($\mu\text{g/L}$)												
Acetone		<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	3,650
Benzene		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.617
Bromomethane		<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)		<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide		<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	768
Chloroethane		<2.0 (J)	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
Chloroform		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.274
Dibromomethane		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		<1.0	1.2	< 1	2.8	< 1	< 1	2.9	2.9	<1	< 1	973
1,2-Dichloroethane		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethylene		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.0167
cis-1,2-Dichloroethylene		1,100	1,400	330	1,500	420	240	976	70	15	254	70
trans-1,2-Dichloroethene		130	100	26	65	47	22	77	10	2	59	100
1,2-Dichloroethene, Total		1,230	1,500	356	1,565	467	262	1,053	79	17	313	(170)
1,2-Dichloropropane		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.25
Ethylbenzene		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)		<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	487
Tetrachloroethylene		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.43
Toluene		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	200
1,1,2-Trichloroethane		<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.314
Trichloroethylene		12	2.7	< 1	2	1.8	< 1	5.7	< 1	< 1	1.9	2.54
1,2,4-Trimethylbenzene		NA	NA	< 5	< 5	< 5	NA	<5	<5	<5	<5	--
Vinyl Chloride		8.5	4	1.4	81	2	1.3	13.9	< 1	< 1	17.5	0.0283
Xylenes, Total		<1.0	<1.0	< 1	< 1	< 1	< 1	< 3	< 3	< 3	< 2	828
TOTAL VOCs		1,251	1,508	357	1,651	471	264	1,076	82	17	332	--
Metals (mg/L)												
Arsenic, Dissolved		0.0242	<0.0100	0.0107	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--
Barium, Dissolved		0.0324	0.0686	0.0539	< 0.02	0.0472	0.081	0.05	0.069	0.05	0.025	--
Cadmium, Dissolved		<0.005	<0.00100	< 0.001	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total		0.00849	<0.0100	< 0.01	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total		0.0381	0.0128	0.108	< 0.005	< 0.005	0.2	< 0.005	0.028	0.039	0.011	--
Lead, Dissolved		<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved		0.0218	<0.0500	< 0.05	< 0.05	< 0.05	< 0.01	0.01	0.01	< 0.01	< 0.01	--
Zinc, Dissolved		0.0295	0.0232	0.0325	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2002 - dry conditions; VOC only.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-11S (Southeast Area)															
		3/1/88	8/1/88	7/24/92	11/8/95	8/27/96	11/6/96	6/13/97	10/15/98	10/13/99	10/2/00	10/31/01	10/24/02	10/15/03	10/22/04	10/13/05	10/18/06
VOCs (µg/L)																	
Acetone		ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	
2-Butanone (MEK)		ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	
n-Butylbenzene		ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
Carbon Disulfide		ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	
Chloroethane		ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
Dibromomethane		ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
1,1-Dichloroethane		ND	ND	ND	19	5.3	8.3	6.6	ND	5.4	5.7	8.6	5.9	5.9	3.7	3.7	2
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
1,1-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	2.0	< 1	3.1	
cis-1,2-Dichloroethylene		NA	NA	ND	280	150	200	170	160	440	460	669	694	746	490	400	460
trans-1,2-Dichloroethylene		NA	NA	ND	15	6.5	10	10	ND	ND	12	15.7	8.7	<1.0	5.6	8.3	19
1,2-Dichloroethylene, Total		44	19	ND	295	157	210	180	160	440	472	685	703	746	496	408	479
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
Toluene		ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
Trichloroethylene		ND	ND	ND	4.1	17	3.8	4.3	8	ND	6.2	10.5	4.0	4.4	4.7	20	1.8
1,2,4-Trimethylbenzene		ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	< 5	
Vinyl Chloride		4	3	20	18	12	14	18	64	190	160	112	120	138	2.2	5.1	78
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	
TOTAL VOCs		48	22	20	336	192	236	209	232	635	644	816	833	894	508	437	564
Metals (mg/L)																	
Arsenic, Dissolved		ND	ND	ND	0.001	ND	ND	ND	ND	ND	ND	ND	<0.100	<0.0100	< 0.01	< 0.01	
Barium, Dissolved		0.418	0.285	0.17	0.11	0.05	ND	ND	0.042	0.082	0.059	0.085	0.122	0.106	0.0830	0.103	0.0793
Cadmium, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	
Chromium, Dissolved total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	
Cyanide, Total		ND	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	<0.00500	< 0.005	< 0.005	
Lead, Dissolved		ND	ND	ND	ND	0.0028	ND	ND	0.015	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	
Nickel, Dissolved		ND	ND	ND	ND	0.03	ND	ND	ND	ND	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	
Zinc, Dissolved		0.026	0.0145	0.122	ND	ND	0.021	ND	0.025	ND	ND	0.052	<0.050	<0.0200	< 0.02	< 0.02	

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUE Date Sampled	MONITORING WELL MW-11S (Southeast Area)				PRG ($\mu\text{g/L}$)
	10/17/07	10/16/08	10/13/09	10/20/10	
VOCs ($\mu\text{g/L}$)					
Acetone	< 20	< 20	< 20	< 20	3,650
Benzene	< 1	< 1	< 1	< 1	0.617
Bromomethane	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	< 20	< 20	< 20	< 20	--
n-Butylbenzene	< 1	< 1	< 1	< 1	--
Carbon Disulfide	< 20	< 20	< 20	< 20	768
Chloroethane	< 2	< 2	< 2	< 2	--
Chloroform	< 1	< 1	< 1	< 1	0.274
Dibromomethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	< 1	< 1	< 1	< 1	973
1,2-Dichloroethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethylene	5.2	4.1	3.5	4.5	0.0167
cis-1,2-Dichloroethylene	483	376	299	410	70
trans-1,2-Dichloroethylene	< 1	3.5	1.8	< 1	100
1,2-Dichloroethylene, Total	483	380	301	410	(170)
1,2-Dichloroproppane	< 1	< 1	< 1	< 1	1.25
Ethylbenzene	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (M)	< 20	< 20	< 20	< 20	487
Tetrachloroethylene	< 1	< 1	< 1	< 1	1.43
Toluene	< 1	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	200
1,1,2-Trichloroethane	< 1	< 1	< 1	< 1	0.314
Trichloroethylene	1.2	1.1	< 1	< 1	2.54
1,2,4-Trimethylbenzene	< 5	< 5	< 5	< 5	--
Vinyl Chloride	104	130	95	192	0.0283
Xylenes, Total	< 1	< 1	< 2	< 2	828
TOTAL VOCs	593	515	400	607	--
Metals (mg/L)					
Arsenic, Dissolved	< 0.1	< 0.1	< 0.10	< 0.10	--
Barium, Dissolved	0.0780	0.0850	0.065	0.057	--
Cadmium, Dissolved	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved	< 0.05	< 0.05	< 0.05	< 0.05	--

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-13S (Southeast Area)											PRG (µg/L)	
		8/1/88	11/1/01	4/23/02	10/24/02	10/17/03	10/22/04	10/14/05	10/19/06	10/17/07	10/17/08	10/19/09		
VOCs (µg/L)														
Acetone		ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	3,650	
Benzene		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.617	
Bromomethane		ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--	
2-Butanone (MEK)		ND	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	--	
n-Butylbenzene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	--	
Carbon Disulfide		ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	768	
Chloroethane		ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--	
Chloroform		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.274	
Dibromomethane		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethane		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	973	
1,2-Dichloroethane		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethylene		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.0167	
cis-1,2-Dichloroethylene		NA	350	200	214	128	87	75	51	66	36	38	28	70
trans-1,2-Dichloroethylene		NA	12	6.4	6.1	3.3	1.9	2.4	<1	<1	1.6	<1	<1	100
1,2-Dichloroethene, Total		28	362	206	220	131	89	77	51	66	37	38	28	(170)
1,2-Dichloropropane		ND	17	8.7	13	7.1	<1.0	10	5.6	5.1	5.1	8.8	<1	1.25
Ethylbenzene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	487	
Tetrachloroethylene		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1.43	
Toluene		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1,000	
1,1,1-Trichloroethane		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	200	
1,1,2-Trichloroethane		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.314	
Trichloroethylene		ND	152	140	181	99.3	120	270	37	125	150	31	67	2.54
1,2,4-Trimethylbenzene		ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride		ND	9.4	12	8.4	17.6	13	2.9	13	8.9	3.1	18	20	0.0283
Xylenes, Total		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 2	< 2	828
TOTAL VOCs		28	540	367	423	255	222	360	107	205	195	96	115	--
Metals (mg/L)														
Arsenic, Dissolved		0.0036	ND	ND	ND	<0.100	<0.0100	< 0.01	< 0.01	< 100	< 100	< 0.10	< 0.10	--
Barium, Dissolved		0.0705	0.19	0.12	0.218 (J)	0.177	0.106	0.197	0.137	0.159	0.2	0.17	0.16	--
Cadmium, Dissolved		ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 30	< 30	< 0.03	< 0.03	--
Chromium, Dissolved total		ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 40	< 40	< 0.04	< 0.04	--
Cyanide, Total		0.048	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005	--
Lead, Dissolved		ND	ND	0.16	ND	<0.080	<0.00500	< 0.005	< 0.005	< 80	< 80	< 0.08	< 0.08	--
Nickel, Dissolved		0.0167	ND	ND	ND	<0.010	<0.0500	< 0.05	0.0104	< 10	< 10	0.013	< 0.01	--
Zinc, Dissolved		0.0542	ND	ND	0.054 (J)	<0.050	<0.0200	< 0.02	< 0.02	< 50	< 50	< 0.05	< 0.05	--

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-13D (Southeast Area)	
		1/28/2002 ⁽¹⁾	PRG (µg/L)
VOCs (µg/L)			
Acetone		ND	3,650
Benzene		ND	0.617
Bromomethane		ND	--
2-Butanone (MEK)		ND	--
n-Butylbenzene		ND	--
Carbon Disulfide		ND	768
Chloroethane		ND	--
Chloroform		ND	0.274
Dibromomethane		ND	--
1,1-Dichloroethane		ND	973
1,2-Dichloroethane		ND	--
1,1-Dichloroethene		ND	0.0167
cis-1,2-Dichloroethene		ND	70
trans-1,2-Dichloroethene		ND	100
1,2-Dichloroethene, Total		ND	(170)
1,2-Dichloropropane		ND	1.25
Ethylbenzene		ND	700
4-Methyl-2-pentanone (MIBK)		ND	487
Tetrachloroethene		ND	1.43
Toluene		ND	1,000
1,1,1-Trichloroethane		ND	200
1,1,2-Trichloroethane		ND	0.314
Trichloroethene		ND	2.54
1,2,4-Trimethylbenzene		ND	--
Vinyl Chloride		ND	0.0283
Xylenes, Total		ND	828
TOTAL VOCs		ND	--
Metals (mg/L)			
Arsenic, Dissolved		<0.005	--
Barium, Dissolved		0.10	--
Cadmium, Dissolved		<0.03	--
Chromium, Dissolved total		<0.04	--
Cyanide, Total		NA	--
Lead, Dissolved		<0.08	--
Nickel, Dissolved		<0.02	--
Zinc, Dissolved		<0.05	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

⁽¹⁾ Data suspect due to well integrity.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

ND = Not detected greater than the method detection limit.

NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-14S (Aboveground Storage Tank Area)																	
		8/1/88	7/23/92	11/7/95	8/27/96	6/11/97	11/18/97	4/21/98	10/15/98	4/12/99	10/14/99	5/4/00	10/2/00	4/19/01	10/30/01	4/23/02	10/23/02	4/16/03	10/15/03
VOCs (µg/L)																			
Acetone		ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5
n-Butylbenzene		ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Carbon Disulfide		ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Chloroethane		ND	ND	5.4	22	6.6	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.8	<5.0
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Dibromomethane		ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1-Dichloroethane		270	86	320	260	150	160	74	63	19	21	12	13	5.7	7.4	8.4	10.2	8.6	9.1
1,2-Dichloroethane		ND	ND	1.1	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
cis-1,2-Dichloroethene		NA	NA	45	20	3.9	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
trans-1,2-Dichloroethene		NA	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,2-Dichloroethene, Total		650	71	45	20	3.9	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Toluene		ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1,1-Trichloroethane		ND	5	10	9.1	4.9	2.6	ND	ND	5.2	ND	ND	ND	14	15.1	4.7	2.0	9.5	3.5
1,1,2-Trichloroethane		6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Trichloroethylene		ND	ND	5.5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,2,4-Trimethylbenzene		ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Vinyl Chloride		140	47	15	5.4	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1	<1.0	<1.0	
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
TOTAL VOCs		1,066	209	402	329	167	172	74	63	24	21	12	13	20	23	13	16	24	13
Metals (mg/L)																			
Arsenic, Dissolved		0.0054	0.0077	0.014	0.004	ND	ND	ND	ND	0.0079	ND	0.021	ND	ND	ND	ND	ND	<0.10	<0.100
Barium, Dissolved		0.0891	0.062	0.05	0.05	0.066	0.069	0.066	0.084	0.056	0.1	0.095	0.11	0.07	0.065	0.089	0.13	0.123	0.088
Cadmium, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030
Chromium, Dissolved total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040
Cyanide, Total		0.035	0.006	ND	ND	ND	ND	0.0078	ND	0.017	ND	ND	0.009	ND	0.014	ND	ND	0.006	<0.005
Lead, Dissolved		ND	ND	ND	0.0065	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	ND	<0.080	<0.080
Nickel, Dissolved		ND	ND	ND	0.02	0.027	0.026	0.022	ND	ND	ND	ND	0.009	0.016	0.01	0.011	0.012	<0.010	<0.010
Zinc, Dissolved		0.0035	0.021	ND	ND	0.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.050	<0.050

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

(J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-14S (Aboveground Storage Tank Area)												PRG ($\mu\text{g/L}$)	
		4/20/04	10/19/04	4/19/05	10/13/05	4/26/06	10/18/06	4/17/07	10/17/07	4/14/08	10/14/08	4/22/09	10/13/09	4/20/10	
VOCs ($\mu\text{g/L}$)															
Acetone		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	3,650
Benzene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.617
Bromomethane		<2.0	<2.0	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
2-Butanone (MEK)		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	--
n-Butylbenzene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
Carbon Disulfide		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	768
Chloroethane		<2.0 (J)	<2.0	<2	<2	<2	<2	<2	<2	16	<2	<2	<2	38	--
Chloroform		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.274
Dibromomethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethane		4.9	13	6.8	12	2.5	3.8	7.9	11	11	22	11	31	24	973
1,2-Dichloroethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethylene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.0167
cis-1,2-Dichloroethylene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	1	2	1	2	3	70
trans-1,2-Dichloroethylene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	100
1,2-Dichloroethylene, Total		<1.0	<1.0	<1	<1	<1	<1	<1	<1	2	1	2	2	3	(170)
1,2-Dichloropropane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.25
Ethylbenzene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	700
4-Methyl-2-pentanone (MIBK)		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	487
Tetrachloroethylene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.43
Toluene		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1,000
1,1,1-Trichloroethane		4.3	10	10	6.8	1.5	<1	2.2	5.6	2.7	<1	3.5	2.6	<1.0	<1.0
1,1,2-Trichloroethane		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.314
Trichloroethylene		3.0	<1.0	<1	<1	<1	<1	<1	1.9	<1	<1	<1	<1	<1	2.54
1,2,4-Trimethylbenzene		NA	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--
Vinyl Chloride		<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	3.4	<1.0	2.5	<1.0	5.9
Xylenes, Total		1.3	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	828
TOTAL VOCs		14	23	17	19	4.0	3.8	10	19	14	43	16	38	26	84
Metals (mg/L)															--
Arsenic, Dissolved		0.0221	0.0136	0.0135	0.0203	<0.100	0.0102	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
Barium, Dissolved		0.117	0.121	0.109	0.133	0.103	0.0998	0.14	0.099	0.075	0.054	0.046	0.057	0.047	0.067
Cadmium, Dissolved		<0.005	<0.00100	<0.001	<0.001	<0.001	<0.001	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	--
Chromium, Dissolved total		<0.005	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	--
Cyanide, Total		<0.005	<0.00500	<0.005	<0.005	<0.005	<0.005	0.22	<0.005	0.0066	< 0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved		<0.005	<0.00500	<0.005	<0.005	<0.005	<0.005	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--
Nickel, Dissolved		0.0102	< 0.0500	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Zinc, Dissolved		0.0280	< 0.200	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

(J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-15S (Aboveground Storage Tank Area)													PRG ($\mu\text{g/L}$)		
		8/6/92	11/29/95	6/12/97	10/14/99	10/2/00	10/30/01	10/23/02	10/15/03	10/19/04	10/13/05	10/18/06	10/17/07	10/16/08	10/13/09		
VOCs ($\mu\text{g/L}$)																	
Acetone		ND	NA	NA	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	3,650	
Benzene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.617	
Bromomethane		ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--	
2-Butanone (MEK)		ND	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--	
n-Butylbenzene		NA	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
Carbon Disulfide		ND	NA	NA	ND	ND	ND	<1.0	<20	< 20	< 20	< 20	< 20	< 20	< 20	768	
Chloroethane		ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--	
Chloroform		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.274	
Dibromomethane		NA	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethane		6	5.8	4.9	ND	ND	1.5	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	973	
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethylene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.0167	
cis-1,2-Dichloroethylene		10	13	41	NA	ND	33	5.9	13	2.9	5.8	2.6	< 1	< 1	< 1	70	
trans-1,2-Dichloroethylene		ND	ND	2.5	NA	ND	2.3	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	100	
1,2-Dichloroethylene, Total		10	13	44	ND	ND	35	5.9	13	2.9	5.8	2.6	< 1	< 1	< 1	(170)	
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1.25	
Ethylbenzene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	700	
4-Methyl-2-pentanone (MIBK)		ND	NA	NA	ND	ND	ND	<12.5	<20	< 20	< 20	< 20	< 20	< 20	< 20	487	
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1.43	
Toluene		ND	1.1	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1,000	
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	200	
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.314	
Trichloroethylene		ND	ND	65	5.8	11	145	14	93	13	8.5	34	7.6	14	3.6	1.8	2.54
1,2,4-Trimethylbenzene		NA	ND	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--	
Vinyl Chloride		ND	28	2.3	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1.0	< 1.0	0.0283	
Xylenes, Total		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	828	
TOTAL VOCs		16	48	116	6	11	182	20	106	16	14	37	8	14	4	2	--
Metals (mg/L)																	
Arsenic, Dissolved		0.0196	ND	ND	0.0059	ND	ND	<0.100	<0.0100	0.0135	<0.0100	<0.10	<0.10	<0.10	<0.10	--	
Barium, Dissolved		0.219	0.14	0.053	0.086	0.097	0.09	0.106	0.079	0.103	0.0939	0.0803	0.12	0.05	0.046	0.059	
Cadmium, Dissolved		0.015	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	--	
Chromium, Dissolved total		ND	0.011	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	--	
Cyanide, Total		ND	ND	ND	ND	ND	ND	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	
Lead, Dissolved		ND	ND	0.0038	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	--	
Nickel, Dissolved		ND	ND	ND	ND	0.007	ND	ND	0.011	<0.0500	< 0.05	0.0108	< 0.01	0.01	< 0.01	--	
Zinc, Dissolved		0.047	ND	0.055	ND	ND	ND	<0.050	0.0210	< 0.02	0.0273	< 0.05	< 0.05	< 0.05	< 0.05	--	

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-16S (Aboveground Storage Tank Area)															PRG (µg/L)	
		8/6/92	11/7/95	11/6/96	6/11/97	10/15/98	10/14/99	10/2/00	11/1/01	10/23/02	10/15/03	10/19/04	10/13/05	10/18/06	10/17/07	10/16/08	10/13/09	
VOCs (µg/L)																		
Acetone	ND	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	<20	<20	<20	<20	<20	3,650	
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.617	
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	<2	<2	<2	<2	<2	<2	--	
2-Butanone (MEK)	ND	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	<20	<20	<20	<20	<20	<20	--	
n-Butylbenzene	NA	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--	
Carbon Disulfide	ND	NA	NA	NA	NA	ND	ND	ND	<1.0	<20.0	<20	<20	<20	<20	<20	<20	768	
Chloroethane	ND	ND	NA	ND	ND	ND	ND	ND	<5.0	<2.0	<2	2.6	<2	<2	<2	<2	--	
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.274	
Dibromomethane	NA	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethane	55	85	26	58	37	38	ND	6.1	30	63	26	21	35	26	21	12	15	973
1,2-Dichloroethane	ND	1.4	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.0167	
cis-1,2-Dichloroethene	NA	190	50	75	NA	93	93	18.5	87.4	147	73	93	110	77	57	38	52	70
trans-1,2-Dichloroethene	NA	ND	1.3	5.3	NA	NA	ND	ND	2.5	11.0	2.2	1.1	5.0	<1	2.7	1.1	<1	100
1,2-Dichloroethene, Total	41	190	51	80	130	93	93	19	90	158	75	94	115	77	59	39	52	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.25	
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	700	
4-Methyl-2-pentanone (MIBK)	ND	NA	NA	NA	NA	ND	ND	ND	<12.5	20.0	<20	<20	<20	<20	<20	<20	487	
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.43	
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1,000	
1,1,1-Trichloroethane	8	2.7	1	2.9	ND	6.9	ND	1.4	10	56	17	6.7	47	35	21	4.2	16	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.314	
Trichloroethene	ND	6.9	ND	ND	47	ND	ND	1.0	ND	2.2	<1.0	4.5	<1	<1	<1	<1	2.54	
1,2,4-Trimethylbenzene	NA	ND	NA	NA	NA	ND	ND	ND	<1.0	NA	<5	<5	<5	<5	<5	<5	--	
Vinyl Chloride	100	41	19	16	37	15	ND	ND	15.6	<1.0	8.6	9.5	4.1	2.3	5.2	4	4.2	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<2	<2	828	
TOTAL VOCs	204	327	97	157	251	153	93	27	146	280	147	136	204	139	107	59	87	--
Metals (mg/L)																		
Arsenic, Dissolved	0.0025	0.003	ND	ND	ND	0.021	ND	ND	<0.100	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.10	<0.10	--	
Barium, Dissolved	0.05	0.06	0.065	ND	0.054	0.059	0.11	0.034	0.146	0.081	0.0755	0.102	0.0813	0.098	0.037	0.033	0.036	--
Cadmium, Dissolved	ND	ND	ND	0.00024	ND	ND	ND	ND	<0.030	<0.00100	<0.001	<0.001	<0.03	<0.03	<0.03	<0.03	--	
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	<0.01	<0.01	<0.04	<0.04	<0.04	<0.04	--	
Cyanide, Total	ND	ND	ND	0.011	ND	ND	0.009	ND	ND	0.021	<0.00500	<0.005	0.00386	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	<0.005	<0.005	<0.08	<0.08	<0.08	<0.08	--	
Nickel, Dissolved	ND	ND	ND	ND	ND	ND	0.009	ND	ND	<0.010	<0.0500	<0.05	<0.05	<0.01	<0.01	<0.01	--	
Zinc, Dissolved	0.038	ND	ND	0.028	ND	ND	ND	ND	0.06	<0.050	<0.0200	0.0242	<0.0200	<0.05	<0.05	<0.05	--	

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-18S (Aboveground Storage Tank Area)		PRG ($\mu\text{g/L}$)
		8/1/1992 ⁽¹⁾	11/1/01	
VOCs ($\mu\text{g/L}$)				
Acetone		ND	ND	3,650
Benzene		ND	ND	0.617
Bromomethane		ND	ND	--
2-Butanone (MEK)		NA	NA	--
n-Butylbenzene		ND	ND	--
Carbon Disulfide		ND	ND	768
Chloroethane		ND	ND	--
Chloroform		ND	ND	0.274
Dibromomethane		ND	ND	--
1,1-Dichloroethane		ND	ND	973
1,2-Dichloroethane		ND	ND	--
1,1-Dichloroethene		ND	ND	0.0167
cis-1,2-Dichloroethene		ND	ND	70
trans-1,2-Dichloroethene		ND	ND	100
1,2-Dichloroethene, Total		ND	ND	(170)
1,2-Dichloropropane		ND	ND	1.25
Ethylbenzene		ND	ND	700
4-Methyl-2-pentanone (MIBK)		ND	ND	487
Tetrachloroethene		ND	ND	1.43
Toluene		ND	ND	1,000
1,1,1-Trichloroethane		ND	ND	200
1,1,2-Trichloroethane		ND	ND	0.314
Trichloroethene		ND	ND	2.54
1,2,4-Trimethylbenzene		ND	ND	--
Vinyl Chloride		ND	1.6	0.0283
Xylenes, Total		ND	ND	828
TOTAL VOCs		ND	1.6	--
Metals (mg/L)				
Arsenic, Dissolved		ND	ND	--
Barium, Dissolved		0.177	0.084	--
Cadmium, Dissolved		ND	ND	--
Chromium, Dissolved total		ND	ND	--
Cyanide, Total		NA	NA	--
Lead, Dissolved		ND	ND	--
Nickel, Dissolved		ND	ND	--
Zinc, Dissolved		5.56	0.2	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

⁽¹⁾ August 1992 data from Technical Memorandum (Warzyn, November 1992).

-- = No PRG assigned.

Bold = Analyte detected greater than the laboratory reporting limit.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-83AS (Southeast Area)																	
		3/1988 ⁽¹⁾	8/1988 ⁽¹⁾	7/23/1992	11/08/1995	8/27/1996	6/13/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/13/1999	5/04/2000	10/02/2000	4/19/2001	10/31/2001	4/23/2002	10/24/2002	4/16/2003
VOCs (µg/L)																			
Acetone	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5
n-Butylbenzene	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Carbon Disulfide	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Chloroethane	ND	ND	ND	ND	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Dibromomethane	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1-Dichloroethane	ND	ND	48	72	51	56	ND	42	39	43	38	26	ND	31	29.1	33.3	18.1		
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1-Dichloroethylene	ND	ND	ND	ND	ND	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
cis-1,2-Dichloroethylene	ND	ND	NA	15,000	15,000	11,000	NA	5,200	1,300	4,000	3,400	2,200	1,500	750	1,730	1,190	1,190	698	
trans-1,2-Dichloroethylene	ND	ND	NA	68	110	56	NA	ND	32	21	17	14	5.9	ND	21	12.6	2.3	2.5	
1,2-Dichloroethylene, Total	ND	ND	12,000	15,068	15,110	11,056	8,700	5,200	1,332	4,021	3,417	2,214	1,506	750	1,751	1,203	1,192	701	
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<12.5
Tetrachloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Toluene	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Vinyl Chloride	110	140	1,200	1,700	1,600	1,400	1,400	900	610	990	830	550	380	220	399	387	447	338	
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
TOTAL VOCs	110	141	13,200	16,816	16,782	12,516	10,156	6,100	1,984	5,050	4,290	2,802	1,912	970	2,181	1,619	1,673	1,057	
Metals (mg/L)																			
Arsenic, Dissolved	ND	ND	ND	0.003	ND	0.0022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10
Barium, Dissolved	0.186	0.117	0.111	0.18	0.09	ND	ND	0.048	0.055	0.088	0.09	0.094	0.068	0.063	0.17	0.068	0.16	0.125	
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040
Cyanide, Total	ND	0.022	0.006	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005
Lead, Dissolved	ND	ND	ND	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18	ND	<0.080
Nickel, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.010
Zinc, Dissolved	ND	0.0054	ND	ND	ND	0.041	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.063	<0.050

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

⁽¹⁾ Possible mislabeling of sample occurred in 1988.

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

(J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-83AS (Southeast Area)													PRG ($\mu\text{g/L}$)		
		10/15/2003	4/20/2004	10/20/2004	4/19/2005	10/12/2005	4/26/2006	10/18/2006	4/17/07	10/17/07	4/14/08	10/14/08	4/20/09	10/13/09	4/20/10	10/20/10	
VOCs ($\mu\text{g/L}$)																	
Acetone		<20.0	<20	<20	<20	<20	27	<20	<20	<20	<20	<20	<20	<20	<20	3,650	
Benzene		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.617	
Bromomethane		NA	<2.0	<2.0	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	
2-Butanone (MEK)		<12.5	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	--	
n-Butylbenzene		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	
Carbon Disulfide		<1.0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	768	
Chloroethane		<5.0	<2.0 (J)	<2.0	2.3	2.1	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	
Chloroform		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.274	
Dibromomethane		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethane		23.7	21	23	24	19	14	17	14	16	13	10	13	12	14	973	
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.0167	
cis-1,2-Dichloroethene		839	700	800	800	570	360	430	435	406	331	240	247	294	251	364	
trans-1,2-Dichloroethene		<1.0	1.6	1.5	2.2	1.3	<1	2.6	<1	<1	<1	<1	<1	<1	<1	100	
1,2-Dichloroethene, Total		839	702	802	802	571	360	433	435	406	331	240	247	294	251	364	
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.25	
Ethylbenzene		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	700	
4-Methyl-2-pentanone (MIBK)		<12.5	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	487	
Tetrachloroethene		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1 J	<1	<1	<1	<1	1.43	
Toluene		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1,000	
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	200	
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.314	
Trichloroethylene		<1.0	1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.54	
1,2,4-Trimethylbenzene		<1.0	NA	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	--	
Vinyl Chloride		486	370	640	670	520	660	540	900	620	437	619	626	282	280	333	
Xylenes, Total		<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	828	
TOTAL VOCs		1,349	1,094	1,465	1,500	1,112	1,034	1,017	1,349	1,042	784	872	883	589	543	711	--
Metals (mg/L)																	
Arsenic, Dissolved		<0.100	<0.0100	<0.0100	0.0123	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--	
Barium, Dissolved		0.078	0.091	0.109	0.116	0.112	0.104	0.102	0.096	0.078	0.095	0.068	0.072	0.057	0.063	0.063	
Cadmium, Dissolved		<0.030	<0.005	<0.00100	<0.001	<0.001	<0.001	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	--	
Chromium, Dissolved total		<0.040	<0.005	<0.0100	<0.01	<0.01	<0.01	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	--	
Cyanide, Total		0.0089	<0.005	<0.00500	<0.005	<0.005	<0.005	<0.005	0.032	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	--	
Lead, Dissolved		<0.080	<0.005	<0.00500	<0.005	<0.005	<0.005	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--	
Nickel, Dissolved		<0.010	<0.0100	<0.0500	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	
Zinc, Dissolved		<0.050	<0.0200	<0.0200	0.0314	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--	

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

⁽¹⁾ Possible mislabeling of sample occurred in 1988.

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

(J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-83AD (Southeast Area)																	PRG ($\mu\text{g/L}$)	
		3/1/88	8/1/88	7/31/92	11/8/95	11/6/96	6/13/97	10/15/98	10/13/99	10/2/00	10/31/01	10/24/02	10/15/03	10/20/04	10/12/05	10/18/06	10/17/07	10/16/08	10/13/09	
VOCs ($\mu\text{g/L}$)																				
Acetone		ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	<20.0	<20.0	<20	<20	<20	<20	<20	<20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<2.0	<2	<2	<2	<2	<2	<2	<2	--
2-Butanone (MEK)		ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	<12.5	<20.0	<20	<20	<20	<20	<20	<20	--
n-Butylbenzene		ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
Carbon Disulfide		ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	<1.0	<20.0	<20	<20	<20	<20	<20	<20	768
Chloroethane		ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	<5.0	<2.0	<2	<2	<2	<2	<2	<2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.274
Dibromomethane		ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethane		ND	ND	0.6	ND	1.5	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.0167
cis-1,2-Dichloroethylene		ND	NA	NA	140	88	60	38	33	8.9	9.3	3.5	2.4	2.2	2	5.3	11	23	41	70
trans-1,2-Dichloroethylene		ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	100
1,2-Dichloroethene, Total		ND	7.2	10	140	88	60	38	33	8.9	9.3	3.5	2.4	2.2	2	5.3	11	23	41	24
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	700
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	<12.5	<20.0	<20	<20	<20	<20	<20	<20	487
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.43
Toluene		ND	0.9	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	13	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.314
Trichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	2.54
1,2,4-Trimethylbenzene		ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	<5	<5	<5	<5	<5	<5	--
Vinyl Chloride		4	38	3	110	73	54	8.8	35	16	3.9	5.8	3.4	<1.0	1.2	8.7	6.6	19	29	18
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<2	<2	828
TOTAL VOCs		4	46	14	250	163	114	47	81	25	13	9.3	5.8	2.2	3.2	14	18	42	70	42
Metals ($\mu\text{g/L}$)																				
Arsenic, Dissolved		NA	NA	ND	0.004	ND	ND	ND	ND	ND	ND	<0.100	<0.0100	0.0161	<0.01	<0.1	<0.1	<0.10	<0.10	--
Barium, Dissolved		NA	NA	0.022	0.25	0.24	0.27	0.17	0.19	0.17	0.16	0.288	0.217	0.149	0.213	0.209	0.17	0.15	0.13	0.11
Cadmium, Dissolved		NA	NA	0.005	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	<0.001	<0.001	<0.03	<0.03	<0.03	<0.03	--
Chromium, Dissolved total		NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	<0.01	<0.01	<0.04	<0.04	<0.04	<0.04	--
Cyanide, Total		NA	NA	0.07	ND	ND	0.014	ND	ND	ND	ND	<0.005	<0.00500	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved		NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	<0.005	<0.005	<0.08	<0.08	<0.08	<0.08	--
Nickel, Dissolved		NA	NA	ND	ND	ND	ND	ND	0.004	ND	ND	<0.010	<0.0500	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	--
Zinc, Dissolved		NA	NA	ND	0.01	ND	0.02	0.02	0.02	ND	0.069	0.057	<0.050	0.0287	<0.02	<0.02	<0.05	<0.05	<0.05	--

Notes:

In samples where total 1,2-dichloroethylene has been listed,

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-83B (Northeast Area)															PRG ($\mu\text{g/L}$)	
		3/1988	7/31/92	6/7/96	11/6/96	6/12/97	10/15/98	10/2/00	10/31/01	10/23/02	10/15/03	10/20/04	10/12/05	10/18/06	10/17/07	10/16/08	10/13/09	
VOCs ($\mu\text{g/L}$)																		
Acetone		270	ND	ND	NA	NA	ND	ND	ND	<20.0	<20.0	<20	<20	<20	<20	<20	<20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	NA	<2.0	<2	<2	<2	<2	<2	<2	<2	--
2-Butanone (MEK)		23	ND	ND	NA	NA	NA	NA	NA	<12.5	<20.0	<20	<20	<20	<20	<20	<20	--
n-Butylbenzene		ND	NA	ND	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
Carbon Disulfide		ND	NA	ND	NA	NA	ND	ND	ND	<1.0	<20.0	<20	<20	<20	<20	<20	<20	768
Chloroethane		ND	ND	NA	ND	ND	ND	ND	ND	<5.0	<2.0	<2	<2	<2	<2	<2	<2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.274
Dibromomethane		ND	NA	ND	NA	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.0167
cis-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	3.8
trans-1,2-Dichloroethylene		ND	NA	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	100
1,2-Dichloroethylene, Total		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	700
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	ND	ND	ND	ND	<12.5	<20.0	<20	<20	<20	<20	<20	<20	487
Tetrachloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.314
Trichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	2.54
1,2,4-Trimethylbenzene		ND	NA	ND	NA	ND	ND	ND	ND	<1.0	NA	<5	<5	<5	<5	<5	<5	--
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1.0	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<2	<2	828
TOTAL VOCs		293	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	
Metals (mg/L)																		
Arsenic, Dissolved		ND	ND	0.003	0.0031	0.0027	ND	0.0054	ND	ND	<0.100	<0.0100	<0.01	<0.01	<0.1	<0.1	<0.10	<0.10
Barium, Dissolved		ND	ND	0.16	0.22	0.19	0.16	0.26	0.18	0.227	0.257	0.225	0.203	0.195	0.23	0.17	0.14	0.15
Cadmium, Dissolved		ND	0.005	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	<0.001	<0.001	<0.03	<0.03	<0.03	<0.03	--
Chromium, Dissolved total		ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	<0.01	<0.01	<0.04	<0.04	<0.04	<0.04	--
Cyanide, Total		ND	0.019	ND	ND	ND	ND	ND	ND	0.0059	<0.00500	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	<0.005	<0.005	<0.08	<0.08	<0.08	<0.08	--
Nickel, Dissolved		ND	ND	0.02	0.021	ND	ND	ND	ND	<0.010	<0.0500	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	--
Zinc, Dissolved		ND	ND	0.1	0.081	0.029	ND	ND	ND	<0.050	0.0252	0.027	<0.0200	<0.05	<0.05	<0.05	<0.05	--

Notes:

In samples where total 1,2-dichloroethylene has been listed, cis-1,2-dichloroethylene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-83DS (Formerly GW-83E; Southeast Area)											PRG (µg/L)	
		8/1/88	11/1/01	4/23/02	10/24/02	10/17/03	10/22/04	10/14/05	10/19/06	10/17/07	10/17/08	10/19/09	10/23/10	
VOCs (µg/L)														
Acetone		ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	3,650
Benzene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.617
Bromomethane		ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)		ND	NA	NA	NA	14.4	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide		ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	768
Chloroethane		ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
Chloroform		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.274
Dibromomethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		ND	1.1	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	973
1,2-Dichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethylene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.0167
cis-1,2-Dichloroethene		ND	191	350	320	239	190	110	79	66	47	44	41	70
trans-1,2-Dichloroethene		ND	1.1	ND	ND	1.1	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	100
1,2-Dichloroethene, Total		ND	192	350	320	240	190	110	79	66	47	44	41	(170)
1,2-Dichloropropane		ND	ND	1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	487
Tetrachloroethene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1.43
Toluene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.314
Trichloroethylene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	2.54
1,2,4-Trimethylbenzene		ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride		ND	16	120	188	80	76	54	31	44	36	28	30	0.0283
Xylenes, Total		ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 2	< 2	828
TOTAL VOCs		ND	209	470	509	334	266	164	110	110	82	72	71	--
Metals (mg/L)														
Arsenic, Dissolved		0.003	ND	ND	ND	<0.100	<0.0100	< 0.01	< 0.01	< 100	< 100	< 0.10	< 0.10	--
Barium, Dissolved		0.211	0.077	0.12	0.153	0.106	0.0947	0.139	0.139	0.0972	0.12	0.12	0.13	--
Cadmium, Dissolved		ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 30	< 30	< 0.03	< 0.03	--
Chromium, Dissolved total		ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 40	< 40	< 0.04	< 0.04	--
Cyanide, Total		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005	--
Lead, Dissolved		ND	ND	0.16	ND	<0.080	<0.00500	< 0.005	< 0.005	< 80	< 80	< 0.08	< 0.08	--
Nickel, Dissolved		ND	ND	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	< 10	< 10	< 0.01	< 0.01	--
Zinc, Dissolved		ND	0.062	ND	ND	<0.050	<0.0200	< 0.02	0.0258	< 50	< 50	< 0.05	< 0.05	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-83DD (Formerly GW-83D; Southeast Area)		PRG ($\mu\text{g/L}$)
		8/1988	11/6/01	
VOCs ($\mu\text{g/L}$)				
Acetone		ND	ND	3,650
Benzene		ND	ND	0.617
Bromomethane		ND	ND	--
2-Butanone (MEK)		ND	NA	--
n-Butylbenzene		ND	ND	--
Carbon Disulfide		ND	ND	768
Chloroethane		ND	ND	--
Chloroform		ND	ND	0.274
Dibromomethane		ND	ND	--
1,1-Dichloroethane		ND	ND	973
1,2-Dichloroethane		ND	ND	--
1,1-Dichloroethene		ND	ND	0.0167
cis-1,2-Dichloroethene		ND	ND	70
trans-1,2-Dichloroethene		ND	ND	100
1,2-Dichloroethene, Total		ND	ND	(170)
1,2-Dichloropropane		ND	ND	1.25
Ethylbenzene		ND	ND	700
4-Methyl-2-pentanone (MIBK)		ND	ND	487
Tetrachloroethene		ND	ND	1.43
Toluene		ND	ND	1,000
1,1,1-Trichloroethane		ND	ND	200
1,1,2-Trichloroethane		ND	ND	0.314
Trichloroethene		ND	ND	2.54
1,2,4-Trimethylbenzene		ND	ND	--
Vinyl Chloride		ND	ND	0.0283
Xylenes, Total		ND	ND	828
TOTAL VOCs		ND	ND	--
Metals (mg/L)				
Arsenic, Dissolved		0.057	ND	--
Barium, Dissolved		0.009	0.05	--
Cadmium, Dissolved		ND	ND	--
Chromium, Dissolved total		ND	ND	--
Cyanide, Total		0.022	NA	--
Lead, Dissolved		0.0023	ND	--
Nickel, Dissolved		ND	ND	--
Zinc, Dissolved		0.004	ND	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

Metals reported in milligrams per liter (mg/L).

Bold = Analyte detected greater than the laboratory reporting limit.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

-- = No PRG assigned.

Table D-3

Notes

Volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs) reported in micrograms per liter ($\mu\text{g/L}$).

PW = Public well.

* The detection of cis-1,2-dichloroethene in PW-8 on 10/18/05 is considered a laboratory artifact from previous analyses.

< = Not detected above the reporting limit provided.

NA = Not analyzed.

Table D-4
Columbia City Municipal Water Supply Well Results - Metals and Inorganics
Wayne Reclamation & Recycling

Notes:

Total metals and inorganic/wet chemistry parameters reported in milligrams per liter (mg/L)

PW = Public well.

< = Not detected above the reporting limit provided.

(J) = estimated.

Bold = Analyte detected above the laboratory reporting limit.

NA = Not analyzed

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-1 (Aboveground Storage Tank Area)														PRG ($\mu\text{g/L}$)	
		8/27/1996	11/6/1996	6/11/1997	11/18/1997	4/21/1998	11/1/2001	10/25/2002	12/22/2003	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009	10/22/2010	
VOCs ($\mu\text{g/L}$)																	
Acetone		NA	NA	NA	NA	ND	ND	<20.0	<20.0	<20	<20	<20	<20	<20	<20	3.650	
Benzene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.617	
Bromomethane		ND	ND	ND	ND	ND	ND	NA	<2.0	<2	<2	<2	<2	<2	<2	--	
2-Butanone (MEK)		NA	NA	NA	NA	NA	ND	<12.5	<20.0	<20	<20	<20	<20	<20	<20	--	
n-Butylbenzene		ND	NA	NA	NA	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--	
Carbon Disulfide		NA	NA	NA	NA	ND	ND	<1.0	<20.0	<20	<20	<20	<20	<20	<20	768	
Chloroethane		ND	2.4	2.2	3.7	ND	ND	<5.0	2.4	<2	<2	<2	11.3	4.7	22	--	
Chloroform		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.274	
Dibromomethane		ND	NA	NA	NA	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethane		170	180	110	190	140	103	11	74	100	26	53	28	34	75	40	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--	
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	1.3	<1	<1	<1	0.0167	
cis-1,2-Dichloroethene		240	180	190	230	200	119	1,100	85	84	22	42	524	54	51	24	70
trans-1,2-Dichloroethene		ND	1.4	1.4	2.9	ND	1.3	<1.0	<1.0	<1.0	<1	<1	8.5	1.9	<1	<1	100
1,2-Dichloroethene, Total		240	181	191	233	200	120	1,113	85	84	22	42	533	55	51	24	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.25	
Ethylbenzene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	700	
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	<12.5	<20.0	<20	<20	<20	<20	<20	487	
Tetrachloroethene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.43	
Toluene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1,000	
1,1,1-Trichloroethane		22	23	20	31	19	13	13	15	17	7	9	12	<1	14	8.3	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.314	
Trichloroethene		ND	ND	ND	ND	ND	2.4	240	9.2	4.3	13	2.6	87	25	3.3	2.4	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	<1.0	NA	<5	<5	<5	<5	<5	<5	--	
Vinyl Chloride		170	ND	100	140	80	55	60	40	38	9.1	16	74	14	20	18	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<2	828	

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

-- = No PRG assigned.

< = Not detected above the reporting limit provided.

No data was collected during the October 1998 sampling event.

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II.

ND = Not detected above the method detection limit.

NA = Not analyzed.

Bold = Analyte detected above laboratory reporting limit.

Italics = Reporting limit above the corresponding PRG.

Shaded = Analyte detected above the corresponding PRG.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-2 (Aboveground Storage Tank Area)								PRG ($\mu\text{g/L}$)
		8/27/1996	11/6/1996	6/11/1997	11/18/1997	4/21/1998	11/1/2001	10/25/2002	10/19/2009	
VOCs ($\mu\text{g/L}$)										
Acetone		NA	NA	NA	NA	ND	ND	ND	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	ND	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	< 20	768
Chloroethane		ND	2.6	2.2	ND	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	< 1	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	< 1	--
1,1-Dichloroethane		8.1	160	110	21	52	18.2	19	12	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	< 1	0.0167
cis-1,2-Dichloroethene		6.6	150	180	53	78	45	55	32	70
trans-1,2-Dichloroethene		ND	1.6	1.4	ND	ND	1.7	ND	1.5	100
1,2-Dichloroethene, Total		6.6	151.6	181.4	53	78	46.7	55	34	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	< 1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	< 1	1,000
1,1,1-Trichloroethane		ND	23.0	20.0	ND	6.1	4.4	ND	14	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	< 1	0.314
Trichloroethene		ND	ND	ND	ND	ND	1.2	ND	< 1	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	< 5	--
Vinyl Chloride		7.7	150	97	19	34	5.3	10	1.8	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	< 2	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$)

ND = Not detected above the method detection limit

NA = Not analyzed.

No data was collected during the October 1998 sampling event

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date

2003 and subsequent data were validated to Level II

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-3 (Aboveground Storage Tank Area)														PRG ($\mu\text{g/L}$)	
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	8/18/1999	10/19/1999	11/1/2001	12/22/2003	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009	
VOCs ($\mu\text{g/L}$)																	
Acetone		NA	NA	NA	NA	ND	ND	ND	<20.0	<20.0	<20	<20	<20	<20	<20	<20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	NA	<2.0	<2	<2	<2	<2	<2	<2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	ND	NA	<12.5	<20.0	<20	<20	<20	<20	<20	<20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	<1.0	<20.0	<20	<20	<20	<20	<20	<20	768
Chloroethane		ND	NA	ND	ND	ND	ND	ND	<5.0	<2.0	<2	<2	<2	<2	<2	<2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethane		ND	3.1	2.7	4.9	ND	ND	9.4	3.6	3.2	3.7	2.8	2.7	3	3	973	
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	--
1,1-Dichloroethene		ND	ND	ND	1.9	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	0.0167
cis-1,2-Dichloroethene		390	330	270	690	340	150	200	349	183	170	260	88	288	140	75	135
trans-1,2-Dichloroethene		10	5.9	6.9	15	11	ND	5.1	8.6	7.1	5.0	6.4	4.6	8.6	4.5	2.1	5.1
1,2-Dichloroethene, Total		400	336	277	705	351	150	205	358	190	175	266	93	297	145	78	140
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	<12.5	<20.0	<20	<20	<20	<20	<20	<20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	1,000
1,1,1-Trichloroethane		ND	ND	ND	1.7	ND	ND	4.4	4.9	5.3	10	9.2	10.1	<1	3.1	8.9	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	0.314
Trichloroethene		150	130	120	240	330	96	140	99	106	92	88	45	96	66	68	78
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	<1.0	NA	<5	<5	<5	<5	<5	<5	--
Vinyl Chloride		43	40	28	50	3.5	11	15	30	31	9.7	12	4.2	8.3	8.4	6.5	7.7
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	<1	<1	<1	<1	<2	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

-- = No PRG assigned.

< = Not detected above the reporting limit provided.

No data was collected during the October 1998 sampling event.

2003 and subsequent data were validated to Level II.

ND = Not detected above the method detection limit.

NA = Not analyzed.

Bold = Analyte detected above laboratory reporting limit.

Italics = Reporting limit above the corresponding PRG.

Shaded = Analyte detected above the corresponding PRG.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-4 (Monitoring Wells MW-4S and MW-7S Area)													PRG ($\mu\text{g/L}$)		
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	4/23/2002	12/22/2003	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009		
VOCS ($\mu\text{g/L}$)																	
Acetone		NA	NA	NA	NA	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	3,650	
Benzene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.617	
Bromomethane		ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--	
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--	
n-Butylbenzene		ND	NA	NA	NA	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
Carbon Disulfide		NA	NA	NA	NA	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	768	
Chloroethane		ND	NA	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--	
Chloroform		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.274	
Dibromomethane		ND	NA	NA	NA	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethane		ND	2.9	1.5	2.6	ND	13.3	1.2	1.5	2.7	1.7	1.7	< 1	< 1	< 1	973	
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.0167	
cis-1,2-Dichloroethene		430	450	290	390	180	1,580	147	165	330	200	180	164	178	128	137	70
trans-1,2-Dichloroethene		27	26	18	24	12	23	16	14	25	16	16	15	16	13	13	100
1,2-Dichloroethene, Total		457	476	308	414	192	1,603	163	179	355	216	196	179	194	141	150	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1.25	
Ethylbenzene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	700	
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	487	
Tetrachloroethene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1.43	
Toluene		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	1,000	
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	200	
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.314	
Trichloroethene		ND	ND	ND	ND	ND	258	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	2.54	
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--	
Vinyl Chloride		ND	ND	ND	ND	ND	142	ND	<1.0	2.9	< 1	< 1	< 1	2	2.1	< 1	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 2	828	

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

-- = No PRG assigned.

< = Not detected above the reporting limit provided.

No data was collected during the October 1998 sampling event.

2003 and subsequent data were validated to Level II.

ND = Not detected above the method detection limit.

NA = Not analyzed.

Bold = Analyte detected above laboratory reporting limit.

Italics = Reporting limit above the corresponding PRG.

Shaded = Analyte detected above the corresponding PRG.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-5 (Southeast of the Landfill)															PRG (µg/L)	
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	4/23/2002	10/25/2002	12/22/2003	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009	10/22/2010	
VOCs (µg/L)																		
Acetone		NA	NA	NA	NA	ND	ND	ND	<100	<20.0	< 100	< 100	< 20	< 20	< 20	< 20	3,650	
Benzene		ND	ND	ND	ND	4.0	3.8	5.6	<5.0	3.6	< 5	2.5	1	< 1	< 1	< 1	0.617	
Bromomethane		ND	ND	ND	ND	ND	ND	ND	<2.0	< 10	< 10	< 1	< 1	< 1	< 1	< 1	--	
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	NA	<62	<20.0	< 100	< 100	< 20	< 20	< 20	< 20	--	
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	--	
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	<5.0	<20.0	< 100	< 100	< 20	< 20	< 20	< 20	768	
Chloroethane		ND	NA	ND	ND	ND	ND	ND	<25	<2.0	< 10	< 10	< 2	< 2	< 2	< 2	--	
Chloroform		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	0.274	
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethane		ND	ND	1.1	4.0	ND	7.1	4.7	5.7	<5.0	4.7	< 5	3.1	1.3	3	4.3	973	
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	--	
1,1-Dichloroethene		ND	ND	ND	ND	2.9	2.2	5.2	<5.0	2.8	< 5	1.8	3.1	1.5	1.5	1.5	0.0167	
cis-1,2-Dichloroethene		330	330	910	1,900	4,000	5,310	3,520	5,500	2,810	3,600	2,200	2,000	2,180	1,600 J	1,130	626	70
trans-1,2-Dichloroethene		20	26	53	140	260	211	143	96	102	63	21	48	44	11	13	6	100
1,2-Dichloroethene, Total		350	356	963	2,040	4,260	5,521	3,663	5,596	2,912	3,663	2,221	2,048	2,224	1,600	1,143	632	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	<62	<20	< 100	< 100	< 20	< 20	< 20	< 20	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	4.0	3.1	ND	<5.0	1.2	< 5	1.4	< 1	< 1	< 1	< 1	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	< 1	0.314
Trichloroethene		ND	1.8	ND	15	130	348	219	55	175	50 (J)	17	140	54	14	26	11	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	<5.0	NA	< 25	< 25	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride		100	200	520	1,600	1,100	393	436	600	335	520	360	200	415	357 J	264	215	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 2	< 2	< 2	< 2	< 2	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

-- = No PRG assigned.

< = Not detected above the reporting limit provided.

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

2003 and subsequent data were validated to Level II.

(J) = estimated.

No data was collected during the October 1998 sampling event.

ND = Not detected above the method detection limit.

NA = Not analyzed.

Bold = Analyte detected above laboratory reporting limit.

Italics = Reporting limit above the corresponding PRG.

Shaded = Analyte detected above the corresponding PRG.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-6 (Southeast Area)							PRG ($\mu\text{g/L}$)
		8/27/1996	11/6/1996	6/12/1997	11/18/97	4/21/1998	11/2/2001	10/19/2009	
VOCs ($\mu\text{g/L}$)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	768
Chloroethane		ND	NA	7.5	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< 1	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		ND	ND	21	ND	ND	ND	10	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	ND	3.6	ND	ND	ND	< 1	0.0167
cis-1,2-Dichloroethene		ND	ND	4,500	1.0	5.7	43	1,060	70
trans-1,2-Dichloroethene		ND	ND	53	ND	ND	ND	12	100
1,2-Dichloroethene, Total		ND	ND	4,553	1.0	5.7	43	1,072	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	< 1	1,000
1,1,1-Trichloroethane		ND	ND	3.1	ND	ND	ND	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	0.314
Trichloroethene		ND	ND	240	ND	ND	ND	171	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		ND	ND	780	1.1	ND	112	4.3	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

ND = Not detected above the method detection limit

NA = Not analyzed.

No data was collected during the October 1998 sampling event

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-7 (Southeast Area)							PRG ($\mu\text{g/L}$)
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	10/19/2009	
VOCs ($\mu\text{g/L}$)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	768
Chloroethane		ND	NA	ND	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< 1	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		ND	ND	ND	ND	ND	1.7	< 1	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	1.1	< 1	0.0167
cis-1,2-Dichloroethene		2.4	910	100	520	ND	653	285	70
trans-1,2-Dichloroethene		ND	43	2.2	12	ND	7.1	6	100
1,2-Dichloroethene, Total		2.4	953	102	532	ND	660	291	(170)
1,2-Dichloropropane		ND	7.4	ND	2.4	ND	ND	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	487
Tetrachloroethene		ND	1.0	ND	ND	ND	ND	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	0.314
Trichloroethene		1.7	290	26	140	43	101	168	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		ND	ND	ND	7.9	3.3	174	35	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$)

ND = Not detected above the method detection limit

NA = Not analyzed.

No data was collected during the October 1998 sampling event

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-8 (Southeast Area)							PRG (µg/L)
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	10/19/2009	
VOCs (µg/L)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	768
Chloroethane		ND	NA	3.6	2.1	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< 1	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		ND	11	19	29	ND	110	46	973
1,2-Dichloroethane		ND	1,400	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	3.1	5.6	5.8	ND	30.6	7.9	0.0167
cis-1,2-Dichloroethene		3,000	1,434	2,800	4,700	5,500	18,500	3,190	70
trans-1,2-Dichloroethene		66	ND	42	44	ND	144	48	100
1,2-Dichloroethene, Total		3,066	1,434	2,842	4,744	5,500	18,644	3,238	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	0.314
Trichloroethene		140	98	160	180	270	5,250	818	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		650	130	310	160	ND	802	282	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit

NA = Not analyzed.

No data was collected during the October 1998 sampling event

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-9 (Southeast Area)							PRG ($\mu\text{g/L}$)
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	10/19/2009	
VOCs ($\mu\text{g/L}$)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	768
Chloroethane		ND	NA	3.3	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< 1	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		1.3	3.3	1.2	1.9	ND	3.0	< 1	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	3.1	5.7	4.4	ND	6.3	5.0	0.0167
cis-1,2-Dichloroethene		340	2,100	2,700	3,000	5,300	3,880	1,640	70
trans-1,2-Dichloroethene		3	19	32	17	61	32.6	16	100
1,2-Dichloroethene, Total		343	2,119	2,732	3,017	5,361	3,913	1,656	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	1.8	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	487
Tetrachloroethene		ND	ND	3.1	ND	ND	ND	2.6	1.43
Toluene		ND	ND	ND	ND	ND	ND	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	0.314
Trichloroethene		23	230	480	300	510	565	370	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		5.1	220	410	400	ND	306	169	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

ND = Not detected above the method detection limit

NA = Not analyzed.

No data was collected during the October 1998 sampling event

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-10 (Southeast Area)							PRG ($\mu\text{g/L}$)
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	10/19/2009	
VOCs ($\mu\text{g/L}$)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	3,650
Benzene		ND	ND	ND	ND	ND	7	< 1	0.617
Bromomethane		2	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	768
Chloroethane		10	NA	NA	17	ND	17	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< 1	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		68	8	55	71	74	82	31	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		5	ND	7	8	ND	7	6.7	0.0167
cis-1,2-Dichloroethene		6,100	1,100	8,600	48,000	11,000	11,000	3,080	70
trans-1,2-Dichloroethene		89	28	58	77	84	89	44	100
1,2-Dichloroethene, Total		6,189	1,128	8,658	48,077	11,084	11,089	3,124	(170)
1,2-Dichloropropane		ND	ND	ND	1	ND	2	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	700
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	487
Tetrachloroethene		1	ND	1	ND	ND	ND	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	0.314
Trichloroethene		420	53	500	440	640	308	289	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		1,400	290	1,900	1,200	1,400	548	277	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ($\mu\text{g/L}$).

ND = Not detected above the method detection limit

NA = Not analyzed.

No data was collected during the October 1998 sampling event

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-6
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

DATE	CONSTITUENT	SE Area SVE System ⁽¹⁾			AST Area - SVE Branch Line G ⁽²⁾			AST Area - SVE Branch Line H ⁽³⁾			Air Stripper ⁽⁴⁾			Sum of VOCs Removed (lbs/day)
		Air Flow Rate ⁽⁵⁾ (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	
		Total	0.88	0.01	0.01	0.02	0.57	1.48						
April 1998	Trichloroethene	1,350	540	0.35	140	57	0.00	160	100	0.01	30	140	0.05	0.41
April 1998	cis-1,2-DCE	1,350	1,000	0.53	140	110	0.01	160	200	0.01	30	1,190	0.43	0.98
April 1998	Vinyl Chloride	1,350	0	0.00	140	7	0.00	160	0	0.00	30	240	0.09	0.09
	Total													1.48
October 1998	Trichloroethene	2,575	2,900	3.60	140	48	0.00	160	300	0.02	56	83	0.06	3.69
October 1998	cis-1,2-DCE	2,575	3,500	3.54	140	50	0.00	160	250	0.02	56	254	0.17	3.73
October 1998	Vinyl Chloride	2,575	0	0.00	140	0	0.00	160	0	0.00	56	110	0.07	0.07
	Total													7.49
April 1999	Trichloroethene	2,730	94	0.12	98	8	0.00	112	21	0.00	71	254	0.22	0.34
April 1999	cis-1,2-DCE	2,730	210	0.23	98	21	0.00	112	47	0.00	71	1,560	1.33	1.56
April 1999	Vinyl Chloride	2,730	15	0.01	98	2	0.00	112	2	0.00	71	210	0.18	0.19
	Total													2.09
Nov/Dec 1999	Trichloroethene	2,590	540	0.68	187	9	0.00	213	23	0.00	47	120	0.07	0.75
Nov/Dec 1999	cis-1,2-DCE	2,590	1,300	1.32	187	24	0.00	213	89	0.01	47	888	0.50	1.83
Nov/Dec 1999	Vinyl Chloride	2,590	29	0.02	187	4	0.00	213	0	0.00	47	120	0.07	0.09
	Total													2.66

Notes:

⁽¹⁾ Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

⁽²⁾ VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

⁽³⁾ VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

⁽⁴⁾ VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

⁽⁵⁾ SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

Table D-6
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

DATE	CONSTITUENT	SE Area SVE System ⁽¹⁾			AST Area - SVE Branch Line G ⁽²⁾			AST Area - SVE Branch Line H ⁽³⁾			Air Stripper ⁽⁴⁾			Sum of VOCs Removed (lbs/day)
		Air Flow Rate ⁽⁵⁾ (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	
		Total			Total			Total			Total			
April 2000	Trichloroethene	1,500	710	0.51	187	590	0.05	213	50	0.01	51	250	0.15	0.73
April 2000	cis-1,2-DCE	1,500	1,400	0.82	187	330	0.02	213	150	0.01	51	1,450	0.89	1.75
April 2000	Vinyl Chloride	1,500	0	0.00	187	0	0.00	213	0	0.00	51	170	0.10	0.10
	Total		1.34			0.08			0.02				1.15	2.58
October 2000	Trichloroethene	1,500	750	0.54	187	710	0.06	213	78	0.01	55	120	0.08	0.69
October 2000	cis-1,2-DCE	1,500	1,300	0.77	187	300	0.02	213	190	0.02	55	1,580	1.04	1.85
October 2000	Vinyl Chloride	1,500	0	0.00	187	0	0.00	213	0	0.00	55	170	0.11	0.11
	Total		1.31			0.09			0.02				1.24	2.65
April 2001	Trichloroethene	1,600	140	0.11	105	57	0.00	120	48	0.00	65	190	0.15	0.26
April 2001	cis-1,2-DCE	1,600	150	0.09	105	21	0.00	120	70	0.00	65	1,230	0.96	1.06
April 2001	Vinyl Chloride	1,600	0	0.00	105	0	0.00	120	0	0.00	65	146	0.11	0.11
	Total		0.20			0.00			0.01				1.22	1.44
Oct/Nov 2001	Trichloroethene	1,600	410	0.32	225	150	0.02	225	0	0.00	90	241	0.26	0.59
Oct/Nov 2001	cis-1,2-DCE	1,600	1,500	0.94	225	130	0.01	225	0	0.00	90	1,447	1.56	2.52
Oct/Nov 2001	Vinyl Chloride	1,600	0	0.00	225	3	0.00	225	0	0.00	90	121	0.13	0.13
	Total		1.26			0.03			0.00				1.96	3.24

Notes:

⁽¹⁾ Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

⁽²⁾ VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

⁽³⁾ VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

⁽⁴⁾ VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

⁽⁵⁾ SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

Table D-6
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

DATE	CONSTITUENT	SE Area SVE System ⁽¹⁾			AST Area - SVE Branch Line G ⁽²⁾			AST Area - SVE Branch Line H ⁽³⁾			Air Stripper ⁽⁴⁾			Sum of VOCs Removed (lbs/day)
		Air Flow Rate ⁽⁵⁾ (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	
		Total		0.80			0.01			0.01			0.72	1.54
April 2002	Trichloroethene	2,600	330	0.41	245	22	0.00	245	48	0.01	65	74	0.06	0.48
April 2002	cis-1,2-DCE	2,600	370	0.38	245	27	0.00	245	60	0.01	65	692	0.54	0.93
April 2002	Vinyl Chloride	2,600	18	0.01	245	0.92	0.00	245	2.1	0.00	65	160	0.12	0.14
	Total			0.80			0.01			0.01			0.72	1.54
October 2002	Trichloroethene	1,200	430	0.25	280	180	0.02	(susp)	0	0.00	44	300	0.16	0.43
October 2002	cis-1,2-DCE	1,200	790	0.37	280	0	0.00	(susp)	0	0.00	44	1,359	0.72	1.09
October 2002	Vinyl Chloride	1,200	0	0.00	280	0	0.00	(susp)	0	0.00	44	220	0.12	0.12
	Total			0.62			0.02			0.00			0.99	1.64
April 2003	Trichloroethene	1,300	270	0.17	640	280	0.09	(susp)	0	0.00	50	268	0.16	0.42
April 2003	cis-1,2-DCE	1,300	470	0.24	640	190	0.05	(susp)	0	0.00	50	1,405	0.84	1.13
April 2003	Vinyl Chloride	1,300	0	0.00	640	0	0.00	(susp)	0	0.00	50	134	0.08	0.08
	Total			0.41			0.13			0.00			1.09	1.63
October 2003	Trichloroethene	2,100	240	0.24	420	260	0.05	(susp)	0	0.00	44	180	0.10	0.39
October 2003	cis-1,2-DCE	2,100	340	0.28	420	0	0.00	(susp)	0	0.00	44	1,694	0.90	1.18
October 2003	Vinyl Chloride	2,100	0	0.00	420	0	0.00	(susp)	0	0.00	44	140.7	0.07	0.07
	Total			0.52			0.05			0.00			1.07	1.64

Notes:

⁽¹⁾ Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

⁽²⁾ VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

⁽³⁾ VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

⁽⁴⁾ VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

⁽⁵⁾ SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

(susp) = The operation of Branch Line H was suspended in October 2002.

Table D-6
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

DATE	CONSTITUENT	SE Area SVE System ⁽¹⁾			AST Area - SVE Branch Line G ⁽²⁾			AST Area - SVE Branch Line H ⁽³⁾			Air Stripper ⁽⁴⁾			Sum of VOCs Removed (lbs/day)
		Air Flow Rate ⁽⁵⁾ (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	
		Total		0.06		0.11			0.00			0.79	0.97	
April 2004	Trichloroethene	1,000	0	0.00	470	360	0.08	(susp)	0	0.00	67	149	0.12	0.20
April 2004	cis-1,2-DCE	1,000	160	0.06	470	160	0.03	(susp)	0	0.00	67	690	0.56	0.65
April 2004	Vinyl Chloride	1,000	0	0.00	470	0	0.00	(susp)	0	0.00	67	147.9	0.12	0.12
	Total			0.06			0.11			0.00			0.79	0.97
October 2004	Trichloroethene	900	180	0.07	470	350	0.08	(susp)	0	0.00	48	336	0.19	0.34
October 2004	cis-1,2-DCE	900	330	0.09	470	170	0.02	(susp)	0	0.00	48	772	0.45	0.56
October 2004	Vinyl Chloride	900	0	0.00	470	18.4	0.00	(susp)	0	0.00	48	260	0.15	0.15
	Total			0.16			0.11			0.00			0.79	1.05
April 2005	Trichloroethene	860	323	0.11	280	105	0.01	(susp)	0	0.00	74	251	0.22	0.35
April 2005	cis-1,2-DCE	860	742	0.19	280	64.6	0.01	(susp)	0	0.00	74	1,670	1.48	1.68
April 2005	Vinyl Chloride	860	0	0.00	280	0	0.00	(susp)	0	0.00	74	210	0.19	0.19
	Total			0.31			0.02			0.00			1.89	2.22
October 2005	Trichloroethene	560	230	0.05	218	260	0.03	(susp)	0	0.00	113	205	0.28	0.36
October 2005	cis-1,2-DCE	560	400	0.07	218	290	0.02	(susp)	0	0.00	113	1,711	2.32	2.41
October 2005	Vinyl Chloride	560	0	0.00	218	0	0.00	(susp)	0	0.00	113	168.7	0.23	0.23
	Total			0.12			0.05			0.00			2.83	3.00

Notes:

⁽¹⁾ Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

⁽²⁾ VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

⁽³⁾ VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

⁽⁴⁾ VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

⁽⁵⁾ SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

(susp) = The operation of Branch Line H was suspended in October 2002.

The soil vapor extraction (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and was restarted in April 2006.

Table D-6
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

DATE	CONSTITUENT	SE Area SVE System ⁽¹⁾			AST Area - SVE Branch Line G ⁽²⁾			AST Area - SVE Branch Line H ⁽³⁾			Air Stripper ⁽⁴⁾			Sum of VOCs Removed (lbs/day)
		Air Flow Rate ⁽⁵⁾ (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	
		Total		0.27			0.07			0.00			1.34	1.68
April 2006	Trichloroethene	1,020	309	0.13	213	197	0.02	(susp)	0	0.00	93	157	0.18	0.33
April 2006	cis-1,2-DCE	1,020	458	0.14	213	805	0.05	(susp)	0	0.00	93	928	1.04	1.23
April 2006	Vinyl Chloride	1,020	0	0.00	213	0	0.00	(susp)	0	0.00	93	110	0.12	0.12
	Total			0.27			0.07			0.00			1.34	1.68
October 2006	Trichloroethene	873	376	0.14	312	380	0.06	(susp)	0	0.00	77	335	0.31	0.50
October 2006	cis-1,2-DCE	873	570	0.15	312	222	0.02	(susp)	0	0.00	77	1,718	1.59	1.76
October 2006	Vinyl Chloride	873	0	0.00	312	0	0.00	(susp)	0	0.00	77	140	0.13	0.13
	Total			0.29			0.08			0.00			2.03	2.39
April 2007	Trichloroethene	(susp)	0	0.00	750	28	0.01	(susp)	0	0.00	85	129	0.13	0.14
April 2007	cis-1,2-DCE	(susp)	0	0.00	750	11	0.00	(susp)	0	0.00	85	894	0.91	0.92
April 2007	Vinyl Chloride	(susp)	0	0.00	750	0	0.00	(susp)	0	0.00	85	123	0.13	0.13
	Total			0.00			0.01			0.00			1.17	1.18
October 2007	Trichloroethene	(susp)	0	0.00	690	52	0.02	(susp)	0	0.00	55	84	0.06	0.07
October 2007	cis-1,2-DCE	(susp)	0	0.00	690	33	0.01	(susp)	0	0.00	55	537	0.35	0.36
October 2007	Vinyl Chloride	(susp)	0	0.00	690	0	0.00	(susp)	0	0.00	55	117	0.08	0.08
	Total			0.00			0.02			0.00			0.49	0.51

Notes:

⁽¹⁾ Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

⁽²⁾ VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

⁽³⁾ VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

⁽⁴⁾ VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

⁽⁵⁾ SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

(susp) = The operation of Branch Line H was suspended in October 2002.

The soil vapor extraction (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and was restarted in April 2006.

The AS system was suspended in November 2006.

Table D-6
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

DATE	CONSTITUENT	SE Area SVE System ⁽¹⁾			AST Area - SVE Branch Line G ⁽²⁾			AST Area - SVE Branch Line H ⁽³⁾			Air Stripper ⁽⁴⁾			Sum of VOCs Removed (lbs/day)
		Air Flow Rate ⁽⁵⁾ (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	
		Total	0.00		0.00		0.00		0.19		0.19		0.19	
April 2008	Trichloroethene	(susp)	0	0.00	700	0	0.00	(susp)	0	0.00	32	45	0.02	0.02
April 2008	cis-1,2-DCE	(susp)	0	0.00	700	0	0.00	(susp)	0	0.00	32	354	0.14	0.14
April 2008	Vinyl Chloride	(susp)	0	0.00	700	0	0.00	(susp)	0	0.00	32	98	0.04	0.04
	Total		0.00		0.00		0.00		0.19		0.19		0.19	
October 2008	Trichloroethene	(susp)	0	0.00	718	559	0.19	(susp)	0	0.00	57	214	0.15	0.34
October 2008	cis-1,2-DCE	(susp)	0	0.00	718	362	0.13	(susp)	0	0.00	57	1,126	0.77	0.90
October 2008	Vinyl Chloride	(susp)	0	0.00	718	0	0.00	(susp)	0	0.00	57	185	0.13	0.13
	Total		0.00		0.32		0.00		1.04		1.36		1.36	
April 2009	Trichloroethene	(susp)	0	0.00	870	9.5	0.00	(susp)	0	0.00	63	82	0.06	0.07
April 2009	cis-1,2-DCE	(susp)	0	0.00	870	13	0.01	(susp)	0	0.00	63	356	0.27	0.27
April 2009	Vinyl Chloride	(susp)	0	0.00	870	1	0.00	(susp)	0	0.00	63	74	0.06	0.06
	Total		0.00		0.01		0.00		0.39		0.40		0.40	
October 2009	Trichloroethene	(susp)	0	0.00	1240	99	0.06	(susp)	0	0.00	55	187	0.12	0.18
October 2009	cis-1,2-DCE	(susp)	0	0.00	1240	37	0.01	(susp)	0	0.00	55	900	0.59	0.61
October 2009	Vinyl Chloride	(susp)	0	0.00	1240	0	0.00	(susp)	0	0.00	55	92	0.06	0.06
	Total		0.00		0.07		0.00		0.78		0.85		0.85	

Notes:

⁽¹⁾ Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

⁽²⁾ VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

⁽³⁾ VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

⁽⁴⁾ VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

⁽⁵⁾ SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

(susp) = The operation of Branch Line H was suspended in October 2002.

The AS system was suspended in November 2006.

The average flow rate is used for the AST - SVE Branch Line calculation.

Table D-6
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

DATE	CONSTITUENT	SE Area SVE System ⁽¹⁾			AST Area - SVE Branch Line G ⁽²⁾			AST Area - SVE Branch Line H ⁽³⁾			Air Stripper ⁽⁴⁾			Sum of VOCs Removed (lbs/day)
		Air Flow Rate ⁽⁵⁾ (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	
		Total		0.00		700	40	0.01	(susp)	0	0.00	32	45	0.02
April 2010	Trichloroethene	(susp)	0	0.00	700	40	0.01	(susp)	0	0.00	32	45	0.02	0.03
April 2010	cis-1,2-DCE	(susp)	0	0.00	700	23	0.00	(susp)	0	0.00	32	354	0.14	0.14
April 2010	Vinyl Chloride	(susp)	0	0.00	700	0	0.00	(susp)	0	0.00	32	98	0.04	0.04
	Total			0.00			0.02			0.00			0.19	0.21
October 2010	Trichloroethene	(susp)	0	0.00	1240	98	0.06	(susp)	0	0.00	59	305	0.22	0.27
October 2010	cis-1,2-DCE	(susp)	0	0.00	1240	48	0.02	(susp)	0	0.00	59	1,312	0.93	0.95
October 2010	Vinyl Chloride	(susp)	0	0.00	1240	0	0.00	(susp)	0	0.00	59	208	0.15	0.15
	Total			0.00			0.08			0.00			1.29	1.37

Notes:

⁽¹⁾ Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

⁽²⁾ VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

⁽³⁾ VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

⁽⁴⁾ VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

⁽⁵⁾ SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

(susp) = The operation of Branch Line H was suspended in October 2002.

The AS system was suspended in November 2006.

The average flow rate is used for the AST - SVE Branch Line calculation.

Table D-7
**Summary of Groundwater Treatment System Effluent Sampling - Metals, Inorganics,
and Polychlorinated Biphenyls**
Wayne Reclamation Recycling

CONSTITUENT	Date Sampled:	11/18/1997	12/18/1997	1/30/1998	10/13/1998	10/13/1999	10/6/2000	10/31/2001	10/24/2002	10/16/2003	10/21/2004	10/13/2005	10/19/2006	10/18/2007	10/14/2008	10/14/2009	10/21/2010
Total Metals (mg/L)																	
Arsenic		0.015	0.0044	0.005	<0.005	<0.005	<0.028	<0.0050	<0.0050	0.0130	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	
Beryllium		<0.0050	<0.0050	<0.0050	<0.003	<0.003	<0.003	<0.0010	<0.0010	<0.0010	<0.00400	<0.004	<0.004	<0.004	<0.004	<0.004	
Cadmium		<0.0050	<0.0050	<0.0050	<0.005	<0.010	<0.005	<0.0010	<0.0010	<0.0010	<0.00500	<0.005	<0.005	<0.005	<0.005	<0.005	
Chromium		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.0100	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	
Copper		0.032	<0.020	1.9	<0.010	<0.005	<0.005	<0.0050	<0.0050	0.0170	<0.0200	<0.02	<0.02	<0.02	<0.02	<0.02	
Lead		<0.10	<0.10	<0.10	<0.005	<0.005	<0.005	<0.0010	<0.0010	<0.0010	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	
Mercury		<0.00020	<0.00020	<0.00020	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.00200	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Molybdenum		<0.20	<0.20	<0.20	<0.020	<0.020	<0.020	0.0061	0.0084	0.0064	<0.0500	<0.05	<0.05	<0.05	<0.05	<0.05	
Nickel		<0.050	<0.020	<0.020	<0.020	<0.005	0.0091	0.0078	0.0110	<0.0500	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Potassium		12.0	12.0	9.5	11.0	9.0	9.0	8.6	10.7	10.8	10.4	9.1	11.6	8.3	9.3	8.5	8.8
Selenium		<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.036	<0.0050	<0.0050	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Silver		<0.010	<0.010	<0.010	<0.020	<0.001	<0.005	<0.0005	<0.0005	<0.0500	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Zinc		0.054	<0.020	<0.020	<0.020	<0.020	<0.020	<0.050	<0.050	0.226	<0.0500	<0.05	<0.05	<0.05	<0.05	<0.05	
Inorganics/Wet Chemistry (mg/L)																	
Ammonia Nitrogen		0.72	0.15	0.28	1.00	0.80	1.10	1.20	1.8	2.6	1.45	1.17	1.91	0.62	1.5	1.0	1.1
Biological Oxygen Demand		<2.0	<2.0	<2.0	<5	6	8	<5	9.4	<5	<5	12	<5	NA	NA	9.46	<5
Chemical Oxygen Demand		23	18	21	<10	<10	16	72	24	17	<10.0	26.9	26.3	22.2	16.5	38.4	11.3
Nitrate/Nitrite Nitrogen		0.32	0.33	0.44	0.036	0.04	0.033	0.23	0.033	0.20	<0.500	<0.5	<0.5	0.10	<0.1	<0.1	0.37 J
Oil & Grease		<5	<5	<5	<5	6	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
pH		8.3	8.27	7.65	NA	7.2	7.2	NA	8.06	7.87	8.14	8.14	8.23	8.26	8.26	8.26	8.27
Surfactants (MBAs)		Negative	Negative	Negative	Positive	Positive	Negative	0.13	0.16	<0.10	0.701	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2
Total Cyanide		<0.005	<0.005	<0.0050	<0.005	<0.005	<0.020	<0.005	<0.005	<0.005 (J)	<0.00500	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Kjeldahl Nitrogen		47	1.21	0.98	1.6	1.09	1.5	1.6	2.1	2.7	2.08	<2	2.67	1.3	2.5 J	1.8	1.1
Total Phenols		<0.01	<0.01	0.17	<0.010	<0.010	<0.005	0.0093	0.0084	<0.010	<0.100	<0.05	<0.05	<0.02	0.03	<0.02	<0.01
Total Phosphorus		0.93	0.75	0.96	<0.05	0.48	<0.15	<0.15	<0.15	<0.05	<0.0500	<0.05	<0.05	<0.05	<0.05 J	0.13	2.5 J
Total Solids		1,100	820	850	830	790	820	850	800	960	940	734	828	688	628	614	656
Total Suspended Solids		11	14	19	27	<5	5	9	<5	6	34.5	<5	7.3	5	6	<5	8
PCBs (µg/L)																	
Aroclor 1016		<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	<0.5	<0.5	<0.5	<0.55	<0.51	<0.52
Aroclor 1221		<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	<0.5	<0.5	<0.5	<0.55	<0.51	<0.52
Aroclor 1232		<0.4	<0.4	<0.4	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	<0.5	<0.5	<0.5	<0.55	<0.51	<0.52
Aroclor 1242		<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	<0.5	<0.5	<0.5	<0.55	<0.51	<0.52
Aroclor 1248		<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	<0.5	<0.5	<0.5	<0.55	<0.51	<0.52
Aroclor 1254		<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	<0.5	<0.5	<0.5	<0.55	<0.51	<0.52
Aroclor 1260		<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	<0.5	<0.5	<0.5	<0.55	<0.51	<0.52

Notes:

Total metals and inorganic/wet chemistry parameters reported in milligrams per liter (mg/L).

Polychlorinated biphenyls (PCBs) are reported in micrograms per liter (µg/L).

Bold = Analyte detected above laboratory reporting limit.

< = Not detected above the reporting limit provided.

NA = Not analyzed.

J = Estimated.

Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	4/23/1999		5/17/1999		6/24/1999	
CONSTITUENT (ppb[v/v])	IN	EFF	IN	EFF	IN	EFF
1,1-Dichloroethane	26	25	29	13	45	9
1,1-Dichloroethene	<14	<13	<18	<12	<17	6
cis-1,2-Dichloroethene	1,600	1,500	2,200	1,000	2,300	390
trans-1,2-Dichloroethene	50	58	52	36	140	35
Tetrachloroethene	<14	17	110	52	46	6
Toluene	20	<13	<18	<12	<17	3
1,1,1-Trichloroethane	36	36	83	25	43	8
Trichloroethene	220	300	570	240	860	120
Vinyl Chloride	360	280	220	120	240	35
Cumulative Risk ⁽¹⁾	7.52E-07	5.93E-07	4.98E-07	2.67E-07	1.08E-07	1.53E-08

Date Sampled	7/13/1999	8/6/1999	9/1/1999	10/14/1999	11/23/1999	12/13/1999
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	45	45	60	61	32	32
1,1-Dichloroethene	<7.8	<9.2	4	<9.2	<14	<12
cis-1,2-Dichloroethene	2,200	<9.2	1,600	3,300	1,400	1,500
trans-1,2-Dichloroethene	100	140	120	260	76	95
Tetrachloroethene	51	27	25	63	16	38
Toluene	<7.8	<9.2	<2.3	<9.2	<14	<12
1,1,1-Trichloroethane	180	44	200	99	97	66
Trichloroethene	440	810	390	1,700	390	520
Vinyl Chloride	340	270	220	180	200	200
Cumulative Risk ⁽¹⁾	1.10E-07	1.09E-07	7.53E-08	1.41E-07	6.93E-08	7.96E-08

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

IN = Influent; EFF = effluent sample; < = not detected above the reporting limit provided.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/3/2000	2/7/2000	3/15/2000	4/25/2000	5/24/2000	6/6/2000
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	29	17	25	31	30	27
1,1-Dichloroethene	<18	<8.3	<9.0	<3.1	<12	2
cis-1,2-Dichloroethene	1,100	740	1,200	2,300	1,000	1,800
trans-1,2-Dichloroethene	68	55	46	83	71	85
Tetrachloroethene	57	<8.3	88	<21	110	30
Toluene	<18	<8.3	<9.0	<3.1	<12	<2.0
1,1,1-Trichloroethane	110	29	89	47	150	110
Trichloroethene	440	220	400	300	440	380
Vinyl Chloride	94	91	61	260	130	190
Cumulative Risk ⁽¹⁾	5.38E-08	3.39E-08	4.88E-08	7.92E-08	7.03E-08	6.86E-08

Date Sampled	7/25/2000	8/4/2000	9/5/2000	10/6/2000	11/7/2000	12/21/2000
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	21	30	34	49	36	30
1,1-Dichloroethene	<9.7	<12	<12	<18	<10	<9.3
cis-1,2-Dichloroethene	1,400	2,200	2,100	2,200	1,900	1,900
trans-1,2-Dichloroethene	39	100	140	160	97	100
Tetrachloroethene	31	56	22	52	110	38
Toluene	<9.7	<12	<12	<18	<10	<9.3
1,1,1-Trichloroethane	80	59	80	93	73	50
Trichloroethene	290	840	540	920	840	760
Vinyl Chloride	190	230	210	130	170	190
Cumulative Risk ⁽¹⁾	6.40E-08	1.06E-07	8.04E-08	8.66E-08	1.01E-07	8.99E-08

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

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Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/30/2001	2/26/2001	3/21/2001	4/23/2001	5/21/2001	6/13/2001
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	30	<140	18	<140	<150	<150
1,1-Dichloroethene	<9.2	<140	2.1	<140	<150	<150
cis-1,2-Dichloroethene	2,000	1,700	1,300	1,000	630	1,400
trans-1,2-Dichloroethene	49	NA	NA	NA	NA	NA
Tetrachloroethene	38	<140	34	<140	<150	<150
Toluene	<9.2	<140	4.0	<140	<150	<150
1,1,1-Trichloroethane	53	<140	26	<140	<150	<150
Trichloroethene	630	260	340	160	<150	430
Vinyl Chloride	270	180	190	160	<150	210
Cumulative Risk ⁽¹⁾	1.02E-07	7.71E-08	6.71E-08	6.72E-08	6.59E-08	9.46E-08

Date Sampled	7/23/2001	8/23/2001	9/17/2001	10/31/2001	11/18/2001	12/28/2001
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<140	<140	<140	<140	<100	<130
1,1-Dichloroethene	<140	<140	<140	<140	<100	<130
cis-1,2-Dichloroethene	1,100	600	680	1,500	2,200	1,700
trans-1,2-Dichloroethene	NA	NA	NA	<140	<100	NA
Tetrachloroethene	<140	<140	<140	<140	<100	<130
Toluene	<140	<140	<140	<140	<100	<130
1,1,1-Trichloroethane	<140	<140	<140	<140	<100	<130
Trichloroethene	140	280	280	410	460	300
Vinyl Chloride	<140	<140	<140	260	210	210
Cumulative Risk ⁽¹⁾	6.16E-08	6.89E-08	6.89E-08	1.04E-07	8.84E-08	8.46E-08

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

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Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/18/2002	2/7/2002	3/21/2002	4/23/2002	5/23/2002	6/18/2002
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<130	<130	<140	3.5	<140	<140
1,1-Dichloroethene	<130	<130	<140	<0.69	<140	<140
cis-1,2-Dichloroethene	1,600	2,800	900	37	800	1,200
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<130	<130	<140	7.8	<140	<140
Toluene	<130	<130	<140	<0.69	<140	<140
1,1,1-Trichloroethane	<130	<130	<140	42	<140	<140
Trichloroethene	280	530	180	29	160	290
Vinyl Chloride	280	500	160	1.0	150	220
Cumulative Risk ⁽¹⁾	9.98E-08	1.64E-07	6.83E-08	2.97E-09	6.49E-08	8.80E-08

Date Sampled	7/19/2002	8/14/2002	9/20/2002	10/24/2002	11/21/2002	12/13/2002
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<140	<140	<100	<130	<140	<140
1,1-Dichloroethene	<140	<140	<100	<130	<140	<140
cis-1,2-Dichloroethene	230	920	1,500	1,500	1,200	1,100
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<140	<140	<100	<130	<140	<140
Toluene	<140	<140	<100	<130	<140	<140
1,1,1-Trichloroethane	<140	<140	<100	<130	<140	<140
Trichloroethene	<140	200	520	1,000	720	410
Vinyl Chloride	<140	220	<100	<130	<140	<140
Cumulative Risk ⁽¹⁾	6.16E-08	8.32E-08	6.61E-08	9.21E-08	9.21E-08	7.58E-08

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

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Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/23/2003	2/10/2003	3/19/2003	4/15/2003	5/19/2003	6/6/2003
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<140	<140	<130	<140	<130	<140
1,1-Dichloroethene	<140	<140	<130	<140	<130	<140
cis-1,2-Dichloroethene	920	520	760	1,400	750	1,000
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<140	<140	<130	<140	<130	<140
Toluene	<140	<140	<130	<140	<130	<140
1,1,1-Trichloroethane	<140	<140	<130	<140	<130	<140
Trichloroethene	420	320	320	380	280	390
Vinyl Chloride	<140	<140	<130	<140	<130	<140
Cumulative Risk ⁽¹⁾	7.63E-08	7.10E-08	6.71E-08	7.42E-08	6.50E-08	7.47E-08

Date Sampled	7/14/2003	8/21/2003	9/15/2003	10/16/2003	11/7/2003	12/22/2003
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<140	<140	2.3	<130	<130	<130
1,1-Dichloroethene	<140	<140	<0.66	<130	<130	<130
cis-1,2-Dichloroethene	740	800	270	750	380	1,100
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<140	<140	7.4	<130	<130	<130
Toluene	<140	<140	<0.66	<130	<130	<130
1,1,1-Trichloroethane	<140	<140	5.4	<130	<130	<130
Trichloroethene	290	330	240	230	230	220
Vinyl Chloride	<140	<140	11	<130	<130	190
Cumulative Risk ⁽¹⁾	6.94E-08	7.15E-08	1.63E-08	6.24E-08	6.24E-08	7.58E-08

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

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Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/29/2004	2/20/2004	3/16/2004	4/19/2004	5/18/2004	6/23/2004
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<130	<120	<140	18	<150	23
1,1-Dichloroethene	<130	<120	<140	3.1	<150	5.0
cis-1,2-Dichloroethene	350	1,200	540	2,300	510	1,800
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<130	<120	<140	7.1	<150	12
Toluene	<130	<120	<140	2.1	<150	5.8
1,1,1-Trichloroethane	<130	<120	<140	4.8	<150	4.3
Trichloroethene	<130	300	<140	480	<150	260
Vinyl Chloride	150	220	<140	350	<150	300
Cumulative Risk ⁽¹⁾	6.18E-08	8.54E-08	6.16E-08	1.07E-07	6.59E-08	8.50E-08

Date Sampled	7/30/2004	8/31/2004	9/22/2004	10/19/2004	11/22/2004	12/17/2004
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<140	<130	<140	<150	<140	<140
1,1-Dichloroethene	<140	<130	<140	<150	<140	<140
cis-1,2-Dichloroethene	1,300	1,000	620	820 (UB)	1,000	1,300
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<140	<130	<140	<150	<140	<140
Toluene	<140	<130	<140	<150	<140	<140
1,1,1-Trichloroethane	<140	<130	<140	<150	<140	<140
Trichloroethene	250	180	<140	180	210	780
Vinyl Chloride	260	140	<140	180 (UB)	170	<140
Cumulative Risk ⁽¹⁾	9.51E-08	6.21E-08	6.16E-08	7.45E-08	7.22E-08	9.52E-08

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

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Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/26/2005	2/18/2005	3/16/2005	4/19/2005	5/13/2005	6/03/2005
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<140	<140	<140	53.2	15.9	22
1,1-Dichloroethene	<140	<140	<140	<13.2	3	3
cis-1,2-Dichloroethene	700	750	620	4,330	<0.71	1,970
trans-1,2-Dichloroethene	NA	NA	<140	<14.1	NA	<113
Tetrachloroethene	<140	<140	<140	46.8	15	21.6
Toluene	<140	<140	<140	<13.2	<0.71	1.5
1,1,1-Trichloroethane	<140	<140	<140	15.6	<0.64	18.2
Trichloroethene	<140	<140	<140	718	35	522
Vinyl Chloride	<140	<140	180	<13.8	<0.74	274
Cumulative Risk ⁽¹⁾	6.16E-08	6.16E-08	7.08E-08	4.82E-08	4.35E-09	9.42E-08

Date Sampled	7/15/2005	8/26/2005	9/29/2005	10/17/2005	11/03/2005	12/01/2005
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	< 140	< 140	56	< 140	< 0.69	22.5
1,1-Dichloroethene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8
cis-1,2-Dichloroethene	920	2,400	7,160 J	1,300	< 0.69	NA
trans-1,2-Dichloroethene	< 140	< 140	185	< 140	< 0.69	19.4
Tetrachloroethene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8
Toluene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8
1,1,1-Trichloroethane	< 140	< 140	16	< 140	< 0.69	< 14.8
Trichloroethene	250	710	< 13.8	300	< 0.69	224
Vinyl Chloride	< 140	530	< 13.8	< 140	< 0.69	344
Cumulative Risk ⁽¹⁾	3.22E-07	1.15E-06	3.12E-08	3.25E-07	1.56E-09	7.20E-07

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

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Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/09/2006	2/10/2006	3/15/2006	4/26/2006	5/23/2006	6/15/2006
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	26	21	22	<13.8	23	<13.8
1,1-Dichloroethene	<14.3	5	<13.8	<13.8	<11.8	<13.8
cis-1,2-Dichloroethene	2,330	1,930	2,650	818	1,800	1160
trans-1,2-Dichloroethene	23	20	18	38	123	49
Tetrachloroethene	<14.3	<3.4	<13.8	35	<11.8	22.4
Toluene	<14.3	<3.4	<13.8	<18.0	<11.8	<13.8
1,1,1-Trichloroethane	<14.3	<3.4	<13.8	<18.0	<11.8	28
Trichloroethene	315	283	270	279	421	313
Vinyl Chloride	423	310	215	147	317	168
Cumulative Risk ⁽¹⁾	1.17E-07	8.72E-08	6.61E-08	5.41E-08	9.74E-08	5.88E-08

Date Sampled	7/18/2006	8/10/2006	9/26/2006	10/20/2006	11/27/2006	12/11/2006
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	31	<13.8	34	39	21	14
1,1-Dichloroethene	<14.3	<13.8	<14.3	<19.8	<14.3	<13.8
cis-1,2-Dichloroethene	1,550 J	<13.8	1,720 J	2,050 J	1,420 J	927 J
trans-1,2-Dichloroethene	59	<13.8	93	146	49	17
Tetrachloroethene	52	<13.8	<14.3	94	17	<13.8
Toluene	<14.3	36	<14.3	<19.8	<14.3	<13.8
1,1,1-Trichloroethane	15	<13.8	<14.3	31	<14.3	<13.8
Trichloroethene	378	<13.8	427	888 J	242	191
Vinyl Chloride	319	<13.8	<14.3	220	230	199
Cumulative Risk ⁽¹⁾	1.02E-07	6.07E-09	2.80E-08	1.12E-07	6.85E-08	5.83E-08

Notes:

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Date Sampled	1/04/2007	2/02/2007	3/13/2007	4/17/2007	5/07/2007	6/06/2007
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	23	<14.3	15	17	36	30
1,1-Dichloroethene	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
cis-1,2-Dichloroethene	1,010	891	1,150	1,330	1,980	1,010
trans-1,2-Dichloroethene	20	<14.3	16	26	34	28
Tetrachloroethene	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
Toluene	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
1,1,1-Trichloroethane	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
Trichloroethene	162	141	196	217	419	464
Vinyl Chloride	197	246	285	334	602	487
Cumulative Risk ⁽¹⁾	5.63E-08	6.66E-08	7.84E-08	9.09E-08	1.64E-07	1.39E-07

Date Sampled	7/16/2007	8/06/2007	9/06/2007	10/18/2007	11/05/2007	12/12/2007
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	35	42	35	<14.8	<14.3	<13.8
1,1-Dichloroethene	<14.3	<14.3	<13.8	<14.8	<14.3	<13.8
cis-1,2-Dichloroethene	2,710	2,020	2,200	694	815	866
trans-1,2-Dichloroethene	35	38	33	<14.8	16	14
Tetrachloroethene	20	23	16	18	<14.3	<13.8
Toluene	<14.3	<14.3	<13.8	<14.8	<14.3	<13.8
1,1,1-Trichloroethane	<14.3	<14.3	<13.8	<14.8	<14.3	<13.8
Trichloroethene	642	641	512	277	217	191
Vinyl Chloride	533	411	454	174	203	176
Cumulative Risk ⁽¹⁾	1.60E-07	1.32E-07	1.35E-07	5.76E-08	6.06E-08	5.30E-08

Notes:

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Date Sampled	1/04/2008	2/12/2008	3/13/2008	4/14/2008	5/05/2008	6/03/2008
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<13.8	<13.8	16	<14.3	21	19
1,1-Dichloroethene	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
cis-1,2-Dichloroethene	1,090	979	1,210	463	1,370	1,460
trans-1,2-Dichloroethene	<13.8	20	17	<14.3	22	23
Tetrachloroethene	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
Toluene	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
1,1,1-Trichloroethane	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
Trichloroethene	226	233	304	45	323	328
Vinyl Chloride	206	<13.8	216	145	<13.8	272
Cumulative Risk ⁽¹⁾	6.17E-08	1.76E-08	6.81E-08	3.82E-08	2.23E-08	8.24E-08

Date Sampled	7/09/2008	8/11/2008	9/20/2008	10/17/2008	11/24/2008	12/10/2008
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<229	25	26	28	<221	32
1,1-Dichloroethene	<229	<14.3	<14.3	<14.3	<221	<13.4
cis-1,2-Dichloroethene	2,810	1,490	1,910	5,010	3,680	1,700
trans-1,2-Dichloroethene	<229	23	24	28	<221	29
Tetrachloroethene	<229	18	<14.3	<14.3	<221	182
Toluene	<229	<14.3	<14.3	<14.3	<221	<13.4
1,1,1-Trichloroethane	<229	<14.3	<14.3	<14.3	<221	<13.4
Trichloroethene	679	372	321	330	828	335
Vinyl Chloride	763	389	404	497	759	401
Cumulative Risk ⁽¹⁾	2.48E-07	1.12E-07	1.13E-07	1.35E-07	2.54E-07	1.39E-07

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 14.

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Date Sampled	1/23/2009	2/09/2009	3/30/2009	4/20/2009	5/13/2009	6/10/2009
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	22	<14.3	21	<13.4	12	<14.3
1,1-Dichloroethene	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
cis-1,2-Dichloroethene	2,340	1,060	1,350	868	1,230	898
trans-1,2-Dichloroethene	23	<14.3	22	16	16	<14.3
Tetrachloroethene	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
Toluene	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
1,1,1-Trichloroethane	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
Trichloroethene	367	185	288	155	192	201
Vinyl Chloride	390	298	295	223	230	221
Cumulative Risk ⁽¹⁾	1.12E-07	8.09E-08	8.56E-08	6.18E-08	6.55E-08	6.39E-08

	7/09/2009	8/25/2009	9/25/2009	10/15/2009	11/13/2009	12/15/2009
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	13	<14.3	6	12	<13.8	16
1,1-Dichloroethene	3	<14.3	<0.69	1.5	<13.8	<14.8
cis-1,2-Dichloroethene	1,290	495	401	903	412	912
trans-1,2-Dichloroethene	16	<14.3	7	12	<13.8	<14.8
Tetrachloroethene	10	<14.3	13	13	<13.8	<14.8
Toluene	<0.72	16	6.5	5	<13.8	<14.8
1,1,1-Trichloroethane	3	<14.3	3.6	3.5	<13.8	<14.8
Trichloroethene	323	116	158	237	108	201
Vinyl Chloride	302	136	107	167	83	199
Cumulative Risk ⁽¹⁾	8.84E-08	3.98E-08	3.51E-08	5.31E-08	2.71E-08	5.90E-08

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 9.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/25/2010	2/17/2010	3/09/2010	4/16/2010	5/10/2010	6/25/2010
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<14.3	19	<58.9	24	16	<14.3
1,1-Dichloroethene	<14.3	<13.8	<57.8	<13.4	<13.8	<14.3
cis-1,2-Dichloroethene	1,060	4,680	1,550	2,510	2,690	893
trans-1,2-Dichloroethene	<14.3	18	<57.8	34	26	21
Tetrachloroethene	<14.3	<13.8	<98.7	<13.4	<13.8	<14.3
Toluene	<14.3	<13.8	<54.9	<13.4	<13.8	<14.3
1,1,1-Trichloroethane	<14.3	<13.8	<79.2	<13.4	<13.8	<14.3
Trichloroethene	145	246	300	639	1,020	401
Vinyl Chloride	281	289	261	373	267	167
Cumulative Risk ⁽¹⁾	7.49E-08	8.20E-08	8.85E-08	1.22E-07	1.18E-07	6.19E-08

Date Sampled	7/13/2010	8/09/2010	9/15/2010	10/22/2010	11/12/2010	12/17/2010
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
1,1-Dichloroethane	<114	20	8.5	<44.2	18	17
1,1-Dichloroethene	<114	<14.3	1.5	<44.2	<13.8	3.1
cis-1,2-Dichloroethene	2,640	1,180	1,820	907	2,080	1,960
trans-1,2-Dichloroethene	<114	27	10	<44.2	17	17
Tetrachloroethene	<114	<14.3	5.8	<44.2	<13.8	6.2
Toluene	<114	<14.3	1.2	<44.2	<13.8	<0.72
1,1,1-Trichloroethane	<114	<14.3	1.4	<44.2	<13.8	3.5
Trichloroethene	785	537	607	158	343	603
Vinyl Chloride	453	370	284	149	240	349
Cumulative Risk ⁽¹⁾	1.64E-07	1.16E-07	9.86E-08	4.97E-08	7.57E-08	1.13E-07

Notes:

⁽¹⁾ Cumulative Risk calculation is indicated on Table 9.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
IN 6/24/1999	(ppb[v/v])	46	860	17	2300	140	240	43	45	17	
	(g/s)	0.0003	0.0048	0.0001	0.0129	0.0008	0.0013	0.0002	0.0003	0.0001	
	Max.Conc.	0.001	0.023	0.000	0.060	0.004	0.006	0.001	0.001	0.000	
	ECR	7.14E-09	4.52E-08			5.55E-08			1.93E-11		1.08E-07
EFF 6/24/1999	(ppb[v/v])	6	120	6	390	35	35	8	9	3	
	(g/s)	0.0000	0.0007	0.0000	0.0022	0.0002	0.0002	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.003	0.000	0.010	0.001	0.001	0.000	0.000	0.000	
	ECR	9.31E-10	6.31E-09			8.10E-09			3.86E-12		1.53E-08
EFF 7/13/1999	(ppb[v/v])	51	440	8	2200	100	340	180	45	8	
	(g/s)	0.0003	0.0025	0.0000	0.0123	0.0006	0.0019	0.0010	0.0003	0.0000	
	Max.Conc.	0.001	0.012	0.000	0.058	0.003	0.009	0.005	0.001	0.000	
	ECR	7.91E-09	2.31E-08			7.87E-08			1.93E-11		1.10E-07
EFF 8/6/1999	(ppb[v/v])	27	810	45	9	140	270	44	45	9	
	(g/s)	0.0002	0.0045	0.0003	0.0001	0.0008	0.0015	0.0002	0.0003	0.0001	
	Max.Conc.	0.001	0.021	0.001	0.000	0.004	0.007	0.001	0.001	0.000	
	ECR	4.19E-09	4.26E-08			6.25E-08			1.93E-11		1.09E-07
EFF 9/1/1999	(ppb[v/v])	25	390	4	1600	120	220	200	60	2	
	(g/s)	0.0001	0.0022	0.0000	0.0090	0.0007	0.0012	0.0011	0.0003	0.0000	
	Max.Conc.	0.001	0.010	0.000	0.042	0.003	0.006	0.005	0.002	0.000	
	ECR	3.88E-09	2.05E-08			5.09E-08			2.57E-11		7.53E-08
EFF 10/14/1999	(ppb[v/v])	63	1700	9	3300	260	180	99	61	9	
	(g/s)	0.0004	0.0095	0.0001	0.0185	0.0015	0.0010	0.0006	0.0003	0.0001	
	Max.Conc.	0.002	0.045	0.000	0.087	0.007	0.005	0.003	0.002	0.000	
	ECR	9.78E-09	8.94E-08			4.17E-08			2.62E-11		1.41E-07
EFF 11/22/1999	(ppb[v/v])	16	390	14	1400	76	200	97	32	14	
	(g/s)	0.0001	0.0022	0.0001	0.0078	0.0004	0.0011	0.0005	0.0002	0.0001	
	Max.Conc.	0.000	0.010	0.000	0.037	0.002	0.005	0.003	0.001	0.000	
	ECR	2.48E-09	2.05E-08			4.63E-08			1.37E-11		6.93E-08
EFF 12/13/1999	(ppb[v/v])	38	520	14	1500	95	200	66	32	14	
	(g/s)	0.0002	0.0029	0.0001	0.0084	0.0005	0.0011	0.0004	0.0002	0.0001	
	Max.Conc.	0.001	0.014	0.000	0.039	0.002	0.005	0.002	0.001	0.000	
	ECR	5.90E-09	2.74E-08			4.63E-08			1.37E-11		7.96E-08
EFF 1/3/2000	(ppb[v/v])	57	440	18	1100	68	94	110	29	18	
	(g/s)	0.0003	0.0025	0.0001	0.0062	0.0004	0.0005	0.0006	0.0002	0.0001	
	Max.Conc.	0.001	0.012	0.000	0.029	0.002	0.002	0.003	0.001	0.000	
	ECR	8.84E-09	2.31E-08			2.18E-08			1.24E-11		5.38E-08
EFF 2/7/2000	(ppb[v/v])	8	220	8	740	55	91	29	17	8	
	(g/s)	0.0000	0.0012	0.0000	0.0041	0.0003	0.0005	0.0002	0.0001	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.019	0.001	0.002	0.001	0.000	0.000	
	ECR	1.29E-09	1.16E-08			2.11E-08			7.29E-12		3.39E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.
 $g/s = ppb[v/v] \times 1,000 / (22,500 \times 2.205 \times 3,600)$.

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:
 Vinyl Chloride -- 8.80E-06
 1,1-Dichloroethane -- 1.63E-08
 Trichloroethene -- 2.00E-06
 Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	88	400	9	1200	46	61	89	25	9	
3/15/2000	(g/s)	0.0005	0.0022	0.0001	0.0067	0.0003	0.0003	0.0005	0.0001	0.0001	
	Max.Conc.	0.002	0.011	0.000	0.032	0.001	0.002	0.002	0.001	0.000	
	ECR	1.37E-08	2.10E-08				1.41E-08		1.07E-11		4.88E-08
EFF	(ppb[v/v])	21	300	3	2300	83	260	47	31	3	
4/25/2000	(g/s)	0.0001	0.0017	0.0000	0.0129	0.0005	0.0015	0.0003	0.0002	0.0000	
	Max.Conc.	0.001	0.008	0.000	0.060	0.002	0.007	0.001	0.001	0.000	
	ECR	3.26E-09	1.58E-08				6.02E-08		1.33E-11		7.92E-08
EFF	(ppb[v/v])	110	440	12	1000	71	130	150	30	12	
5/24/2000	(g/s)	0.0006	0.0025	0.0001	0.0056	0.0004	0.0007	0.0008	0.0002	0.0001	
	Max.Conc.	0.003	0.012	0.000	0.026	0.002	0.003	0.004	0.001	0.000	
	ECR	1.71E-08	2.31E-08				3.01E-08		1.29E-11		7.03E-08
EFF	(ppb[v/v])	30	380	2	1800	85	190	110	27	2	
6/6/2000	(g/s)	0.0002	0.0021	0.0000	0.0101	0.0005	0.0011	0.0006	0.0002	0.0000	
	Max.Conc.	0.001	0.010	0.000	0.047	0.002	0.005	0.003	0.001	0.000	
	ECR	4.66E-09	2.00E-08				4.40E-08		1.16E-11		6.86E-08
EFF	(ppb[v/v])	31	290	10	1400	39	190	80	21	10	
7/25/2000	(g/s)	0.0002	0.0016	0.0001	0.0078	0.0002	0.0011	0.0004	0.0001	0.0001	
	Max.Conc.	0.001	0.008	0.000	0.037	0.001	0.005	0.002	0.001	0.000	
	ECR	4.81E-09	1.53E-08				4.40E-08		9.00E-12		6.40E-08
EFF	(ppb[v/v])	56	840	12	2200	100	230	59	30	12	
8/4/2000	(g/s)	0.0003	0.0047	0.0001	0.0123	0.0006	0.0013	0.0003	0.0002	0.0001	
	Max.Conc.	0.001	0.022	0.000	0.058	0.003	0.006	0.002	0.001	0.000	
	ECR	8.69E-09	4.42E-08				5.32E-08		1.29E-11		1.06E-07
EFF	(ppb[v/v])	22	540	12	2100	140	210	80	34	12	
9/5/2000	(g/s)	0.0001	0.0030	0.0001	0.0118	0.0008	0.0012	0.0004	0.0002	0.0001	
	Max.Conc.	0.001	0.014	0.000	0.055	0.004	0.006	0.002	0.001	0.000	
	ECR	3.41E-09	2.84E-08				4.86E-08		1.46E-11		8.04E-08
EFF	(ppb[v/v])	52	920	18	2200	160	130	93	49	18	
10/6/2000	(g/s)	0.0003	0.0052	0.0001	0.0123	0.0009	0.0007	0.0005	0.0003	0.0001	
	Max.Conc.	0.001	0.024	0.000	0.058	0.004	0.003	0.002	0.001	0.000	
	ECR	8.07E-09	4.84E-08				3.01E-08		2.10E-11		8.66E-08
EFF	(ppb[v/v])	110	840	10	1900	97	170	73	36	10	
11/7/2000	(g/s)	0.0006	0.0047	0.0001	0.0106	0.0005	0.0010	0.0004	0.0002	0.0001	
	Max.Conc.	0.003	0.022	0.000	0.050	0.003	0.004	0.002	0.001	0.000	
	ECR	1.71E-08	4.42E-08				3.93E-08		1.54E-11		1.01E-07
EFF	(ppb[v/v])	38	760	9	1900	100	190	50	30	9	
12/21/2000	(g/s)	0.0002	0.0043	0.0001	0.0106	0.0006	0.0011	0.0003	0.0002	0.0001	
	Max.Conc.	0.001	0.020	0.000	0.050	0.003	0.005	0.001	0.001	0.000	
	ECR	5.90E-09	4.00E-08				4.40E-08		1.29E-11		8.99E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.
 g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:
 Vinyl Chloride -- 8.80E-06
 1,1-Dichloroethane -- 1.63E-08
 Trichloroethene -- 2.00E-06
 Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	38	630	9	2000	49	270	53	30	9	
1/30/2001	(g/s)	0.0002	0.0035	0.0001	0.0112	0.0003	0.0015	0.0003	0.0002	0.0001	
	Max.Conc.	0.001	0.017	0.000	0.053	0.001	0.007	0.001	0.001	0.000	
	ECR	5.90E-09	3.31E-08				6.25E-08		1.29E-11		1.02E-07
EFF	(ppb[v/v])	140	260	140	1700	1	180	140	140	140	
2/26/2001	(g/s)	0.0008	0.0015	0.0008	0.0095	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.045	0.000	0.005	0.004	0.004	0.004	
	ECR	2.17E-08	1.37E-08				4.17E-08		6.00E-11		7.71E-08
EFF	(ppb[v/v])	34	340	2	1300	1	190	26	18	4	
3/21/2001	(g/s)	0.0002	0.0019	0.0000	0.0073	0.0000	0.0011	0.0001	0.0001	0.0000	
	Max.Conc.	0.001	0.009	0.000	0.034	0.000	0.005	0.001	0.000	0.000	
	ECR	5.28E-09	1.79E-08				4.40E-08		7.72E-12		6.71E-08
EFF	(ppb[v/v])	140	160	140	1000	1	160	140	140	140	
4/23/2001	(g/s)	0.0008	0.0009	0.0008	0.0056	0.0000	0.0009	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	8.42E-09				3.70E-08		6.00E-11		6.72E-08
EFF	(ppb[v/v])	150	150	150	630	1	150	150	150	150	
5/21/2001	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.017	0.000	0.004	0.004	0.004	0.004	
	ECR	2.33E-08	7.89E-09				3.47E-08		6.43E-11		6.59E-08
EFF	(ppb[v/v])	150	430	150	1400	1	210	150	150	150	
6/13/2001	(g/s)	0.0008	0.0024	0.0008	0.0078	0.0000	0.0012	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.011	0.004	0.037	0.000	0.006	0.004	0.004	0.004	
	ECR	2.33E-08	2.26E-08				4.86E-08		6.43E-11		9.46E-08
EFF	(ppb[v/v])	140	140	140	1100	1	140	140	140	140	
7/23/2001	(g/s)	0.0008	0.0008	0.0008	0.0062	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.029	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09				3.24E-08		6.00E-11		6.16E-08
EFF	(ppb[v/v])	140	280	140	600	1	140	140	140	140	
8/23/2001	(g/s)	0.0008	0.0016	0.0008	0.0034	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.016	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.47E-08				3.24E-08		6.00E-11		6.89E-08
EFF	(ppb[v/v])	140	280	140	680	1	140	140	140	140	
9/17/2001	(g/s)	0.0008	0.0016	0.0008	0.0038	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.018	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.47E-08				3.24E-08		6.00E-11		6.89E-08
EFF	(ppb[v/v])	140	410	140	1500	140	260	140	140	140	
10/31/2001	(g/s)	0.0008	0.0023	0.0008	0.0084	0.0008	0.0015	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.011	0.004	0.039	0.004	0.007	0.004	0.004	0.004	
	ECR	2.17E-08	2.16E-08				6.02E-08		6.00E-11		1.04E-07
EFF	(ppb[v/v])	100	460	100	2200	100	210	100	100	100	
11/18/2001	(g/s)	0.0006	0.0026	0.0006	0.0123	0.0006	0.0012	0.0006	0.0006	0.0006	
	Max.Conc.	0.003	0.012	0.003	0.058	0.003	0.006	0.003	0.003	0.003	
	ECR	1.55E-08	2.42E-08				4.86E-08		4.29E-11		8.84E-08
EFF	(ppb[v/v])	130	300	130	1700	1	210	130	130	130	
12/28/2001	(g/s)	0.0007	0.0017	0.0007	0.0095	0.0000	0.0012	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.008	0.003	0.045	0.000	0.006	0.003	0.003	0.003	
	ECR	2.02E-08	1.58E-08				4.86E-08		5.57E-11		8.46E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF (ppb[v/v])	130	280	130	1600	1	280	130	130	130	130	
1/18/2002 (g/s)	0.0007	0.0016	0.0007	0.0090	0.0000	0.0016	0.0007	0.0007	0.0007	0.0007	
Max.Conc.	0.003	0.007	0.003	0.042	0.000	0.007	0.003	0.003	0.003	0.003	
ECR	2.02E-08	1.47E-08			6.48E-08			5.57E-11			9.98E-08
EFF (ppb[v/v])	130	530	130	2800	1	500	130	130	130	130	
2/7/2002 (g/s)	0.0007	0.0030	0.0007	0.0157	0.0000	0.0028	0.0007	0.0007	0.0007	0.0007	
Max.Conc.	0.003	0.014	0.003	0.074	0.000	0.013	0.003	0.003	0.003	0.003	
ECR	2.02E-08	2.79E-08			1.16E-07			5.57E-11			1.64E-07
EFF (ppb[v/v])	140	180	140	900	1	160	140	140	140	140	
3/21/2002 (g/s)	0.0008	0.0010	0.0008	0.0050	0.0000	0.0009	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.005	0.004	0.024	0.000	0.004	0.004	0.004	0.004	0.004	
ECR	2.17E-08	9.47E-09			3.70E-08			6.00E-11			6.83E-08
EFF (ppb[v/v])	8	29	1	37	1	1	42	4	4	1	
4/23/2002 (g/s)	0.0000	0.0002	0.0000	0.0002	0.0000	0.0000	0.0002	0.0000	0.0000	0.0000	
Max.Conc.	0.000	0.001	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	
ECR	1.21E-09	1.53E-09			2.31E-10			1.50E-12			2.97E-09
EFF (ppb[v/v])	140	160	140	800	1	150	140	140	140	140	
5/23/2002 (g/s)	0.0008	0.0009	0.0008	0.0045	0.0000	0.0008	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.004	0.004	0.021	0.000	0.004	0.004	0.004	0.004	0.004	
ECR	2.17E-08	8.42E-09			3.47E-08			6.00E-11			6.49E-08
EFF (ppb[v/v])	140	290	140	1200	1	220	140	140	140	140	
6/18/2002 (g/s)	0.0008	0.0016	0.0008	0.0067	0.0000	0.0012	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.008	0.004	0.032	0.000	0.006	0.004	0.004	0.004	0.004	
ECR	2.17E-08	1.53E-08			5.09E-08			6.00E-11			8.80E-08
EFF (ppb[v/v])	140	140	140	230	1	140	140	140	140	140	
7/19/2002 (g/s)	0.0008	0.0008	0.0008	0.0013	0.0000	0.0008	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.004	0.004	0.006	0.000	0.004	0.004	0.004	0.004	0.004	
ECR	2.17E-08	7.36E-09			3.24E-08			6.00E-11			6.16E-08
EFF (ppb[v/v])	140	200	140	920	1	220	140	140	140	140	
8/14/2002 (g/s)	0.0008	0.0011	0.0008	0.0052	0.0000	0.0012	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.005	0.004	0.024	0.000	0.006	0.004	0.004	0.004	0.004	
ECR	2.17E-08	1.05E-08			5.09E-08			6.00E-11			8.32E-08
EFF (ppb[v/v])	100	520	100	1500	1	100	100	100	100	100	
9/20/2002 (g/s)	0.0006	0.0029	0.0006	0.0084	0.0000	0.0006	0.0006	0.0006	0.0006	0.0006	
Max.Conc.	0.003	0.014	0.003	0.039	0.000	0.003	0.003	0.003	0.003	0.003	
ECR	1.55E-08	2.74E-08			2.31E-08			4.29E-11			6.61E-08
EFF (ppb[v/v])	140	720	140	1300	1	140	140	140	140	140	
10/24/2002 (g/s)	0.0008	0.0040	0.0008	0.0073	0.0000	0.0008	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.019	0.004	0.034	0.000	0.004	0.004	0.004	0.004	0.004	
ECR	2.17E-08	3.79E-08			3.24E-08			6.00E-11			9.21E-08
EFF (ppb[v/v])	140	720	140	1200	1	140	140	140	140	140	
11/21/2002 (g/s)	0.0008	0.0040	0.0008	0.0067	0.0000	0.0008	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.019	0.004	0.032	0.000	0.004	0.004	0.004	0.004	0.004	
ECR	2.17E-08	3.79E-08			3.24E-08			6.00E-11			9.21E-08
EFF (ppb[v/v])	140	410	140	1100	1	140	140	140	140	140	
12/13/2002 (g/s)	0.0008	0.0023	0.0008	0.0062	0.0000	0.0008	0.0008	0.0008	0.0008	0.0008	
Max.Conc.	0.004	0.011	0.004	0.029	0.000	0.004	0.004	0.004	0.004	0.004	
ECR	2.17E-08	2.16E-08			3.24E-08			6.00E-11			7.58E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	140	420	140	920	1	140	140	140	140	
1/23/2003	(g/s)	0.0008	0.0024	0.0008	0.0052	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.011	0.004	0.024	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	2.21E-08			3.24E-08			6.00E-11		7.63E-08
EFF	(ppb[v/v])	140	320	140	520	1	140	140	140	140	
2/10/2003	(g/s)	0.0008	0.0018	0.0008	0.0029	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.008	0.004	0.014	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.68E-08			3.24E-08			6.00E-11		7.10E-08
EFF	(ppb[v/v])	130	320	130	760	1	130	130	130	130	
3/19/2003	(g/s)	0.0007	0.0018	0.0007	0.0043	0.0000	0.0007	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.008	0.003	0.020	0.000	0.003	0.003	0.003	0.003	
	ECR	2.02E-08	1.68E-08			3.01E-08			5.57E-11		6.71E-08
EFF	(ppb[v/v])	140	380	140	1400	1	140	140	140	140	
4/15/2003	(g/s)	0.0008	0.0021	0.0008	0.0078	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.010	0.004	0.037	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	2.00E-08			3.24E-08			6.00E-11		7.42E-08
EFF	(ppb[v/v])	130	280	130	750	1	130	130	130	130	
5/19/2003	(g/s)	0.0007	0.0016	0.0007	0.0042	0.0000	0.0007	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.007	0.003	0.020	0.000	0.003	0.003	0.003	0.003	
	ECR	2.02E-08	1.47E-08			3.01E-08			5.57E-11		6.50E-08
EFF	(ppb[v/v])	140	390	140	1000	1	140	140	140	140	
6/6/2003	(g/s)	0.0008	0.0022	0.0008	0.0056	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.010	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	2.05E-08			3.24E-08			6.00E-11		7.47E-08
EFF	(ppb[v/v])	140	290	140	740	1	140	140	140	140	
7/14/2003	(g/s)	0.0008	0.0016	0.0008	0.0041	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.008	0.004	0.019	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.53E-08			3.24E-08			6.00E-11		6.94E-08
EFF	(ppb[v/v])	140	330	140	800	1	140	140	140	140	
8/21/2003	(g/s)	0.0008	0.0018	0.0008	0.0045	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.009	0.004	0.021	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.74E-08			3.24E-08			6.00E-11		7.15E-08
EFF	(ppb[v/v])	7.4	240	0.66	270	1	11	5.4	2.3	0.66	
9/15/2003	(g/s)	0.0000	0.0013	0.0000	0.0015	0.0000	0.0001	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.007	0.000	0.000	0.000	0.000	0.000	
	ECR	1.15E-09	1.26E-08			2.55E-09			9.86E-13		1.63E-08
EFF	(ppb[v/v])	130	230	130	750	1	130	130	130	130	
10/16/2003	(g/s)	0.0007	0.0013	0.0007	0.0042	0.0000	0.0007	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.006	0.003	0.020	0.000	0.003	0.003	0.003	0.003	
	ECR	2.02E-08	1.21E-08			3.01E-08			5.57E-11		6.24E-08
EFF	(ppb[v/v])	130	230	130	380	1	130	130	130	130	
11/7/2003	(g/s)	0.0007	0.0013	0.0007	0.0021	0.0000	0.0007	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.006	0.003	0.010	0.000	0.003	0.003	0.003	0.003	
	ECR	2.02E-08	1.21E-08			3.01E-08			5.57E-11		6.24E-08
EFF	(ppb[v/v])	130	220	130	1100	1	190	130	130	130	
12/22/2003	(g/s)	0.0007	0.0012	0.0007	0.0062	0.0000	0.0011	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.006	0.003	0.029	0.000	0.005	0.003	0.003	0.003	
	ECR	2.02E-08	1.16E-08			4.40E-08			5.57E-11		7.58E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	130	130	130	350	1	150	130	130	130	
1/29/2004	(g/s)	0.0007	0.0007	0.0007	0.0020	0.0000	0.0008	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.003	0.003	0.009	0.000	0.004	0.003	0.003	0.003	
	ECR	2.02E-08	6.84E-09			3.47E-08			5.57E-11		6.18E-08
EFF	(ppb[v/v])	120	300	120	1200	1	220	120	120	120	
2/20/2004	(g/s)	0.0007	0.0017	0.0007	0.0067	0.0000	0.0012	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.008	0.003	0.032	0.000	0.006	0.003	0.003	0.003	
	ECR	1.86E-08	1.58E-08			5.09E-08			5.14E-11		8.54E-08
EFF	(ppb[v/v])	140	140	140	540	1	140	140	140	140	
3/16/2004	(g/s)	0.0008	0.0008	0.0008	0.0030	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.014	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09			3.24E-08			6.00E-11		6.16E-08
EFF	(ppb[v/v])	7.1	480	3.1	2300	1	350	4.8	18	2.1	
4/19/2004	(g/s)	0.0000	0.0027	0.0000	0.0129	0.0000	0.0020	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.013	0.000	0.060	0.000	0.009	0.000	0.000	0.000	
	ECR	1.10E-09	2.52E-08			8.10E-08			7.72E-12		1.07E-07
EFF	(ppb[v/v])	150	150	150	510	1	150	150	150	150	
5/18/2004	(g/s)	0.0008	0.0008	0.0008	0.0029	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.013	0.000	0.004	0.004	0.004	0.004	
	ECR	2.33E-08	7.89E-09			3.47E-08			6.43E-11		6.59E-08
EFF	(ppb[v/v])	12	260	5.0	1800	1	300	4.3	23	5.8	
6/23/2004	(g/s)	0.0001	0.0015	0.0000	0.0101	0.0000	0.0017	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.007	0.000	0.047	0.000	0.008	0.000	0.001	0.000	
	ECR	1.86E-09	1.37E-08			6.94E-08			9.86E-12		8.50E-08
EFF	(ppb[v/v])	140	250	140	1300	1	260	140	140	140	
7/30/2004	(g/s)	0.0008	0.0014	0.0008	0.0073	0.0000	0.0015	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.034	0.000	0.007	0.004	0.004	0.004	
	ECR	2.17E-08	1.32E-08			6.02E-08			6.00E-11		9.51E-08
EFF	(ppb[v/v])	130	180	130	1000	1	140	130	130	130	
8/31/2004	(g/s)	0.0007	0.0010	0.0007	0.0056	0.0000	0.0008	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.005	0.003	0.026	0.000	0.004	0.003	0.003	0.003	
	ECR	2.02E-08	9.47E-09			3.24E-08			5.57E-11		6.21E-08
EFF	(ppb[v/v])	140	140	140	620	1	140	140	140	140	
9/22/2004	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.016	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09			3.24E-08			6.00E-11		6.16E-08
EFF	(ppb[v/v])	150	180	150	820	1	180	150	150	150	
10/19/2004	(g/s)	0.0008	0.0010	0.0008	0.0046	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.005	0.004	0.022	0.000	0.005	0.004	0.004	0.004	
	ECR	2.33E-08	9.47E-09			4.17E-08			6.43E-11		7.45E-08
EFF	(ppb[v/v])	140	210	140	1000	1	170	140	140	140	
11/22/2004	(g/s)	0.0008	0.0012	0.0008	0.0056	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.006	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.10E-08			3.93E-08			6.00E-11		7.22E-08
EFF	(ppb[v/v])	140	780	140	1300	1	140	140	140	140	
12/17/2004	(g/s)	0.0008	0.0044	0.0008	0.0073	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.021	0.004	0.034	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	4.10E-08			3.24E-08			6.00E-11		9.52E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
1/26/2005	EFF (ppb[v/v])	140	140	140	700	1	140	140	140	140	
	(g/s)	0.0008	0.0008	0.0008	0.0039	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.018	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09			3.24E-08			6.00E-11		6.16E-08
2/18/2005	EFF (ppb[v/v])	140	140	140	750	1	140	140	140	140	
	(g/s)	0.0008	0.0008	0.0008	0.0042	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.020	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09			3.24E-08			6.00E-11		6.16E-08
3/16/2005	EFF (ppb[v/v])	140	140	140	620	170	180	140	140	140	
	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0010	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.016	0.004	0.005	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09			4.17E-08			6.00E-11		7.08E-08
4/19/2005	EFF (ppb[v/v])	46.8	718	13.2	4330	14.1	13.8	15.6	53.2	13.2	
	(g/s)	0.0003	0.0040	0.0001	0.0242	0.0001	0.0001	0.0001	0.0003	0.0001	
	Max.Conc.	0.001	0.019	0.000	0.114	0.000	0.000	0.000	0.001	0.000	
	ECR	7.26E-09	3.78E-08			3.19E-09			2.28E-11		4.82E-08
5/13/2005	EFF (ppb[v/v])	15.1	34.7	3.4	0.71	1	0.74	0.64	15.9	0.71	
	(g/s)	0.0001	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	ECR	2.34E-09	1.83E-09			1.71E-10			6.82E-12		4.35E-09
6/03/2005	EFF (ppb[v/v])	21.6	522	3	1970	113	274	18.2	22	1.5	
	(g/s)	0.0001	0.0029	0.0000	0.0110	0.0006	0.0015	0.0001	0.0001	0.0000	
	Max.Conc.	0.001	0.014	0.000	0.052	0.003	0.007	0.000	0.001	0.000	
	ECR	3.35E-09	2.75E-08			6.34E-08			9.43E-12		9.42E-08
7/15/2005	EFF (ppb[v/v])	140	250	140	920	140	140	140	140	140	
	(g/s)	0.0008	0.0014	0.0008	0.0052	0.0008	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.024	0.004	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.32E-08			2.87E-07			6.00E-11		3.22E-07
8/26/2005	EFF (ppb[v/v])	140	710	140	2400	140	530	140	140	140	
	(g/s)	0.0008	0.0040	0.0008	0.0134	0.0008	0.0030	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.019	0.004	0.063	0.004	0.014	0.004	0.004	0.004	
	ECR	2.17E-08	3.73E-08			1.09E-06			6.00E-11		1.15E-06
9/29/2005	EFF (ppb[v/v])	13.8	13.8	13.8	7160	185	13.8	16.40	56.2	13.8	
	(g/s)	0.0001	0.0001	0.0001	0.0401	0.0010	0.0001	0.0001	0.0003	0.0001	
	Max.Conc.	0.000	0.000	0.000	0.188	0.005	0.000	0.000	0.001	0.000	
	ECR	2.14E-09	7.26E-10			2.83E-08			2.41E-11		3.12E-08
10/17/2005	EFF (ppb[v/v])	140	300	140	1300	140	140	140	140	140	
	(g/s)	0.0008	0.0017	0.0008	0.0073	0.0008	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.008	0.004	0.034	0.004	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.58E-08			2.87E-07			6.00E-11		3.25E-07
11/03/2005	EFF (ppb[v/v])	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	
	(g/s)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	ECR	1.07E-10	3.63E-11			1.42E-09			2.96E-13		1.56E-09
12/01/2005	EFF (ppb[v/v])	14.8	224	14.8	1	19.4	344	14.8	22.5	14.8	
	(g/s)	0.0001	0.0013	0.0001	0.0000	0.0001	0.0019	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.000	0.001	0.009	0.000	0.001	0.000	
	ECR	2.30E-09	1.18E-08			7.06E-07			9.65E-12		7.20E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS										Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen		
EFF	(ppb[v/v])	14	315	14	2330	23	423	14	26	14		
1/09/2006	(g/s)	0.0001	0.0018	0.0001	0.0130	0.0001	0.0024	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.008	0.000	0.061	0.001	0.011	0.000	0.001	0.000		
	ECR	2.22E-09	1.66E-08			9.79E-08		1.11E-11				1.17E-07
EFF	(ppb[v/v])	3.4	283	4.7	1930	19.9	310	3.4	21.4	3.4		
2/10/2006	(g/s)	0.0000	0.0016	0.0000	0.0108	0.0001	0.0017	0.0000	0.0001	0.0000		
	Max.Conc.	0.000	0.007	0.000	0.051	0.001	0.008	0.000	0.001	0.000		
	ECR	5.28E-10	1.49E-08			7.17E-08		9.17E-12				8.72E-08
EFF	(ppb[v/v])	13.8	270	13.8	2650	18	215.00	13.8	21.5	13.8		
3/15/2006	(g/s)	0.0001	0.0015	0.0001	0.0148	0.0001	0.0012	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.007	0.000	0.070	0.000	0.006	0.000	0.001	0.000		
	ECR	2.14E-09	1.42E-08			4.98E-08		9.22E-12				6.61E-08
EFF	(ppb[v/v])	34.7	279	13.8	818	38	147	18.0	13.8	18.0		
4/26/2006	(g/s)	0.0002	0.0016	0.0001	0.0046	0.0002	0.0008	0.0001	0.0001	0.0001		
	Max.Conc.	0.001	0.007	0.000	0.022	0.001	0.004	0.000	0.000	0.000		
	ECR	5.38E-09	1.47E-08			3.40E-08		5.92E-12				5.41E-08
EFF	(ppb[v/v])	11.8	421	11.8	1800	123	317	11.8	23.30	11.8		
5/23/2006	(g/s)	0.0001	0.0024	0.0001	0.0101	0.0007	0.0018	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.011	0.000	0.047	0.003	0.008	0.000	0.001	0.000		
	ECR	1.83E-09	2.21E-08			7.34E-08		9.99E-12				9.74E-08
EFF	(ppb[v/v])	22.4	313	13.8	1160	48.6	168	28.4	13.8	13.8		
6/25/2006	(g/s)	0.0001	0.0018	0.0001	0.0065	0.0003	0.0009	0.0002	0.0001	0.0001		
	Max.Conc.	0.001	0.008	0.000	0.031	0.001	0.004	0.001	0.000	0.000		
	ECR	3.48E-09	1.65E-08			3.89E-08		5.92E-12				5.88E-08
EFF	(ppb[v/v])	52	378	14	1550	59	319	15	31	14		
7/18/2006	(g/s)	0.0003	0.0021	0.0001	0.0087	0.0003	0.0018	0.0001	0.0002	0.0001		
	Max.Conc.	0.001	0.010	0.000	0.041	0.002	0.008	0.000	0.001	0.000		
	ECR	8.13E-09	1.99E-08			7.38E-08		1.32E-11				1.02E-07
EFF	(ppb[v/v])	13.8	14	13.8	14	13.8	14	13.8	13.8	35.7		
8/10/2006	(g/s)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002		
	Max.Conc.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001		
	ECR	2.14E-09	7.26E-10			3.19E-09		5.92E-12				6.07E-09
EFF	(ppb[v/v])	14.3	427	14.3	1720	93	14.30	14.3	33.6	14.3		
9/26/2006	(g/s)	0.0001	0.0024	0.0001	0.0096	0.0005	0.0001	0.0001	0.0002	0.0001		
	Max.Conc.	0.000	0.011	0.000	0.045	0.002	0.000	0.000	0.001	0.000		
	ECR	2.22E-09	2.25E-08			3.31E-09		1.44E-11				2.80E-08
EFF	(ppb[v/v])	93.7	888	19.8	2050	146	220	31.3	39.2	19.8		
10/20/2006	(g/s)	0.0005	0.0050	0.0001	0.0115	0.0008	0.0012	0.0002	0.0002	0.0001		
	Max.Conc.	0.002	0.023	0.001	0.054	0.004	0.006	0.001	0.001	0.001		
	ECR	1.45E-08	4.67E-08			5.09E-08		1.68E-11				1.12E-07
EFF	(ppb[v/v])	16.6	242	14.3	1420	49	230	14.3	20.90	14.3		
11/27/2006	(g/s)	0.0001	0.0014	0.0001	0.0080	0.0003	0.0013	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.006	0.000	0.037	0.001	0.006	0.000	0.001	0.000		
	ECR	2.58E-09	1.27E-08			5.32E-08		8.96E-12				6.85E-08
EFF	(ppb[v/v])	13.8	191	13.8	927	17.0	199	13.8	14.0	13.8		
12/11/2006	(g/s)	0.0001	0.0011	0.0001	0.0052	0.0001	0.0011	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.005	0.000	0.024	0.000	0.005	0.000	0.000	0.000		
	ECR	2.14E-09	1.00E-08			4.61E-08		6.00E-12				5.83E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	14	162	14	1010	20	197	14	23	14	
1/04/2007	(g/s)	0.0001	0.0009	0.0001	0.0057	0.0001	0.0011	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.004	0.000	0.027	0.001	0.005	0.000	0.001	0.000	
	ECR	2.22E-09	8.52E-09				4.56E-08		9.86E-12		5.63E-08
EFF	(ppb[v/v])	14	141	14	891	14	246	14	14	14	
2/02/2007	(g/s)	0.0001	0.0008	0.0001	0.0050	0.0001	0.0014	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.004	0.000	0.023	0.000	0.006	0.000	0.000	0.000	
	ECR	2.22E-09	7.42E-09				5.69E-08		6.13E-12		6.66E-08
EFF	(ppb[v/v])	14	196	14	1150	16	285	14	15	14	
3/13/2007	(g/s)	0.0001	0.0011	0.0001	0.0064	0.0001	0.0016	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.030	0.000	0.007	0.000	0.000	0.000	
	ECR	2.14E-09	1.03E-08				6.60E-08		6.43E-12		7.84E-08
EFF	(ppb[v/v])	14	217	14	1330	26	334	14	17	14	
4/17/2007	(g/s)	0.0001	0.0012	0.0001	0.0074	0.0001	0.0019	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.035	0.001	0.009	0.000	0.000	0.000	
	ECR	2.14E-09	1.14E-08				7.73E-08		7.29E-12		9.09E-08
EFF	(ppb[v/v])	14	419	14	1980	34	602	14	23	14	
5/07/2007	(g/s)	0.0001	0.0023	0.0001	0.0111	0.0002	0.0034	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.011	0.000	0.052	0.001	0.016	0.000	0.001	0.000	
	ECR	2.22E-09	2.20E-08				1.39E-07		9.86E-12		1.64E-07
EFF	(ppb[v/v])	14	464	14	1010	28	487	14	26	14	
6/06/2007	(g/s)	0.0001	0.0026	0.0001	0.0057	0.0002	0.0027	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.012	0.000	0.027	0.001	0.013	0.000	0.001	0.000	
	ECR	2.22E-09	2.44E-08				1.13E-07		1.11E-11		1.39E-07
EFF	(ppb[v/v])	20	642	14	2710	35	533	14	35	14	
7/16/2007	(g/s)	0.0001	0.0036	0.0001	0.0152	0.0002	0.0030	0.0001	0.0002	0.0001	
	Max.Conc.	0.001	0.017	0.000	0.071	0.001	0.014	0.000	0.001	0.000	
	ECR	3.10E-09	3.38E-08				1.23E-07		1.49E-11		1.60E-07
EFF	(ppb[v/v])	23	641	14	2020	38	411	14	42	14	
8/06/2007	(g/s)	0.0001	0.0036	0.0001	0.0113	0.0002	0.0023	0.0001	0.0002	0.0001	
	Max.Conc.	0.001	0.017	0.000	0.053	0.001	0.011	0.000	0.001	0.000	
	ECR	3.57E-09	3.37E-08				9.51E-08		1.78E-11		1.32E-07
EFF	(ppb[v/v])	16	512	14	2200	33	454	14	35	14	
9/06/2007	(g/s)	0.0001	0.0029	0.0001	0.0123	0.0002	0.0025	0.0001	0.0002	0.0001	
	Max.Conc.	0.000	0.013	0.000	0.058	0.001	0.012	0.000	0.001	0.000	
	ECR	2.54E-09	2.69E-08				1.05E-07		1.50E-11		1.35E-07
EFF	(ppb[v/v])	18	277	15	694	15	174	15	15	15	
10/18/2007	(g/s)	0.0001	0.0016	0.0001	0.0039	0.0001	0.0010	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.007	0.000	0.018	0.000	0.005	0.000	0.000	0.000	
	ECR	2.73E-09	1.46E-08				4.03E-08		6.34E-12		5.76E-08
EFF	(ppb[v/v])	14	217	14	815	16	203	14	14	14	
11/05/2007	(g/s)	0.0001	0.0012	0.0001	0.0046	0.0001	0.0011	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.021	0.000	0.005	0.000	0.000	0.000	
	ECR	2.17E-09	1.14E-08				4.70E-08		6.00E-12		6.06E-08
EFF	(ppb[v/v])	14	191	14	866	14	176	14	14	14	
12/12/2007	(g/s)	0.0001	0.0011	0.0001	0.0048	0.0001	0.0010	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.023	0.000	0.005	0.000	0.000	0.000	
	ECR	2.17E-09	1.00E-08				4.07E-08		6.00E-12		5.30E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS										Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen		
EFF	(ppb[v/v])	14	226	14	1090	14	206	14	14	14		
1/04/2008	(g/s)	0.0001	0.0013	0.0001	0.0061	0.0001	0.0012	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.006	0.000	0.029	0.000	0.005	0.000	0.000	0.000		
	ECR	2.14E-09	1.19E-08				4.77E-08		5.92E-12		6.17E-08	
EFF	(ppb[v/v])	14	233	14	979	20	14	14	14	14		
2/12/2008	(g/s)	0.0001	0.0013	0.0001	0.0055	0.0001	0.0001	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.006	0.000	0.026	0.001	0.000	0.000	0.000	0.000		
	ECR	2.14E-09	1.23E-08				3.19E-09		5.92E-12		1.76E-08	
EFF	(ppb[v/v])	13	304	13	1210	17	216	13	16	13		
3/13/2008	(g/s)	0.0001	0.0017	0.0001	0.0068	0.0001	0.0012	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.008	0.000	0.032	0.000	0.006	0.000	0.000	0.000		
	ECR	2.08E-09	1.60E-08				5.00E-08		6.86E-12		6.81E-08	
EFF	(ppb[v/v])	14	45	14	463	14	145	14	14	14		
4/14/2008	(g/s)	0.0001	0.0003	0.0001	0.0026	0.0001	0.0008	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.001	0.000	0.012	0.000	0.004	0.000	0.000	0.000		
	ECR	2.22E-09	2.37E-09				3.36E-08		6.13E-12		3.82E-08	
EFF	(ppb[v/v])	14	323	14	1370	22	14	14	21	14		
5/08/2008	(g/s)	0.0001	0.0018	0.0001	0.0077	0.0001	0.0001	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.008	0.000	0.036	0.001	0.000	0.000	0.001	0.000		
	ECR	2.14E-09	1.70E-08				3.19E-09		9.00E-12		2.23E-08	
EFF	(ppb[v/v])	14	328	14	1460	23	272	14	19	14		
6/03/2008	(g/s)	0.0001	0.0018	0.0001	0.0082	0.0001	0.0015	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.009	0.000	0.038	0.001	0.007	0.000	0.000	0.000		
	ECR	2.22E-09	1.73E-08				6.30E-08		8.15E-12		8.24E-08	
EFF	(ppb[v/v])	229	679	229	2810	14	763	229	229	14		
7/09/2008	(g/s)	0.0013	0.0038	0.0013	0.0157	0.0001	0.0043	0.0013	0.0013	0.0001		
	Max.Conc.	0.006	0.018	0.006	0.074	0.000	0.020	0.006	0.006	0.000		
	ECR	3.55E-08	3.57E-08				1.77E-07		9.82E-11		2.48E-07	
EFF	(ppb[v/v])	18	372	14	1490	20	389	14	25	14		
8/11/2008	(g/s)	0.0001	0.0021	0.0001	0.0083	0.0001	0.0022	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.010	0.000	0.039	0.001	0.010	0.000	0.001	0.000		
	ECR	2.79E-09	1.96E-08				9.00E-08		1.07E-11		1.12E-07	
EFF	(ppb[v/v])	14	321	14	1910	17	404	14	26	13		
9/20/2008	(g/s)	0.0001	0.0018	0.0001	0.0107	0.0001	0.0023	0.0001	0.0001	0.0001		
	Max.Conc.	0.000	0.008	0.000	0.050	0.000	0.011	0.000	0.001	0.000		
	ECR	2.17E-09	1.69E-08				9.35E-08		1.11E-11		1.13E-07	
EFF	(ppb[v/v])	14	330	14	5010	14	497	14	28	14		
10/17/2008	(g/s)	0.0001	0.0018	0.0001	0.0281	0.0001	0.0028	0.0001	0.0002	0.0001		
	Max.Conc.	0.000	0.009	0.000	0.132	0.000	0.013	0.000	0.001	0.000		
	ECR	2.17E-09	1.74E-08				1.15E-07		1.20E-11		1.35E-07	
EFF	(ppb[v/v])	221	828	221	3680	22	759	221	221	14		
11/24/2008	(g/s)	0.0012	0.0046	0.0012	0.0206	0.0001	0.0042	0.0012	0.0012	0.0001		
	Max.Conc.	0.006	0.022	0.006	0.097	0.001	0.020	0.006	0.006	0.000		
	ECR	3.43E-08	4.36E-08				1.76E-07		9.47E-11		2.54E-07	
EFF	(ppb[v/v])	182	335	13	1700	23	401	13	32	14		
12/10/2008	(g/s)	0.0010	0.0019	0.0001	0.0095	0.0001	0.0022	0.0001	0.0002	0.0001		
	Max.Conc.	0.005	0.009	0.000	0.045	0.001	0.011	0.000	0.001	0.000		
	ECR	2.82E-08	1.76E-08				9.28E-08		1.37E-11		1.39E-07	

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.05 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	13	367	13	2340	23	390	13	22	13	
1/23/2009	(g/s)	0.0001	0.0021	0.0001	0.0131	0.0001	0.0022	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.010	0.000	0.062	0.001	0.010	0.000	0.001	0.000	
	ECR	2.02E-09	1.93E-08			9.03E-08		9.43E-12			1.12E-07
EFF	(ppb[v/v])	14	185	14	1060	23	298	14	14	14	
2/09/2009	(g/s)	0.0001	0.0010	0.0001	0.0059	0.0001	0.0017	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.028	0.001	0.008	0.000	0.000	0.000	
	ECR	2.17E-09	9.73E-09			6.90E-08		6.00E-12			8.09E-08
EFF	(ppb[v/v])	14	288	14	1350	22	295	14	21	14	
3/30/2009	(g/s)	0.0001	0.0016	0.0001	0.0076	0.0001	0.0017	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.008	0.000	0.036	0.001	0.008	0.000	0.001	0.000	
	ECR	2.17E-09	1.51E-08			6.83E-08		9.00E-12			8.56E-08
EFF	(ppb[v/v])	13	155	13	868	16	223	13	13	13	
4/20/2009	(g/s)	0.0001	0.0009	0.0001	0.0049	0.0001	0.0012	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.004	0.000	0.023	0.000	0.006	0.000	0.000	0.000	
	ECR	2.02E-09	8.15E-09			5.16E-08		5.57E-12			6.18E-08
EFF	(ppb[v/v])	14	192	14	1230	16	230	14	12	14	
5/13/2009	(g/s)	0.0001	0.0011	0.0001	0.0069	0.0001	0.0013	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.032	0.000	0.006	0.000	0.000	0.000	
	ECR	2.17E-09	1.01E-08			5.32E-08		5.14E-12			6.55E-08
EFF	(ppb[v/v])	14	201	14	898	14	221	14	14	14	
6/10/2009	(g/s)	0.0001	0.0011	0.0001	0.0050	0.0001	0.0012	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.024	0.000	0.006	0.000	0.000	0.000	
	ECR	2.17E-09	1.06E-08			5.11E-08		6.00E-12			6.39E-08
EFF	(ppb[v/v])	10	323	3	1290	16	302	3	13	1	
7/09/2009	(g/s)	0.0001	0.0018	0.0000	0.0072	0.0001	0.0017	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.008	0.000	0.034	0.000	0.008	0.000	0.000	0.000	
	ECR	1.47E-09	1.70E-08			6.99E-08		5.62E-12			8.84E-08
EFF	(ppb[v/v])	14	116	14	495	14	136	14	14	16	
8/25/2009	(g/s)	0.0001	0.0006	0.0001	0.0028	0.0001	0.0008	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.003	0.000	0.013	0.000	0.004	0.000	0.000	0.000	
	ECR	2.17E-09	6.10E-09			3.15E-08		6.00E-12			3.98E-08
EFF	(ppb[v/v])	13	158	1	401	1	107	4	6	7	
9/25/2009	(g/s)	0.0001	0.0009	0.0000	0.0022	0.0000	0.0006	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.004	0.000	0.011	0.000	0.003	0.000	0.000	0.000	
	ECR	2.02E-09	8.31E-09			2.48E-08		2.36E-12			3.51E-08
EFF	(ppb[v/v])	13	237	2	903	12	167	4	12	5	
10/15/2009	(g/s)	0.0001	0.0013	0.0000	0.0051	0.0001	0.0009	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.024	0.000	0.004	0.000	0.000	0.000	
	ECR	2.02E-09	1.25E-08			3.87E-08		5.23E-12			5.31E-08
EFF	(ppb[v/v])	14	108	14	412	14	83	14	14	14	
11/13/2009	(g/s)	0.0001	0.0006	0.0001	0.0023	0.0001	0.0005	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.003	0.000	0.011	0.000	0.002	0.000	0.000	0.000	
	ECR	2.17E-09	5.68E-09			1.92E-08		6.00E-12			2.71E-08
EFF	(ppb[v/v])	15	201	15	912	15	199	15	16	15	
12/15/2009	(g/s)	0.0001	0.0011	0.0001	0.0051	0.0001	0.0011	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.024	0.000	0.005	0.000	0.000	0.000	
	ECR	2.33E-09	1.06E-08			4.61E-08		6.86E-12			5.90E-08

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.025 x 3.600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE Carcinogen	TCE Carcinogen	1,1-DCE Non-Carcinogen	cis-1,2-DCE Non-Carcinogen	trans-1,2-DCE Non-Carcinogen	VC Carcinogen	1,1,1-TCA Non-Carcinogen	1,1-DCA Carcinogen	Toluene Non-Carcinogen	
EFF	(ppb[v/v])	14	145	14	1060	14	281	14	14		
1/25/2010	(g/s)	0.0001	0.0008	0.0001	0.0059	0.0001	0.0016	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.004	0.000	0.028	0.000	0.007	0.000	0.000	0.000	
	ECR	2.22E-09	7.63E-09				6.50E-08		6.13E-12		7.49E-08
EFF	(ppb[v/v])	14	246	14	4680	18	289	14	19		
2/17/2010	(g/s)	0.0001	0.0014	0.00001	0.0262	0.0001	0.0016	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.123	0.000	0.008	0.000	0.000	0.000	
	ECR	2.14E-09	1.29E-08				6.69E-08		8.15E-12		8.20E-08
EFF	(ppb[v/v])	79	300	58	1550	58	261	79	59		
3/09/2010	(g/s)	0.0004	0.0017	0.0003	0.0087	0.0003	0.0015	0.0004	0.0003	0.0000	
	Max.Conc.	0.002	0.008	0.002	0.041	0.002	0.007	0.002	0.002	0.000	
	ECR	1.23E-08	1.58E-08				6.04E-08		2.53E-11		8.85E-08
EFF	(ppb[v/v])	13	639	13	2510	34	373	13	24		
4/16/2010	(g/s)	0.0001	0.0036	0.0001	0.0141	0.0002	0.0021	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.017	0.000	0.066	0.001	0.010	0.000	0.001	0.000	
	ECR	2.08E-09	3.36E-08				8.63E-08		1.03E-11		1.22E-07
EFF	(ppb[v/v])	14	1020	14	2690	26	267	14	16		
5/10/2010	(g/s)	0.0001	0.0057	0.0001	0.0151	0.0001	0.0015	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.027	0.000	0.071	0.001	0.007	0.000	0.000	0.000	
	ECR	2.14E-09	5.37E-08				6.18E-08		6.86E-12		1.18E-07
EFF	(ppb[v/v])	401	14	893	21	167	14	14	14		
6/25/2010	(g/s)	0.0000	0.0022	0.0001	0.0050	0.0001	0.0009	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.011	0.000	0.023	0.001	0.004	0.000	0.000	0.000	
	ECR	0.00E+00	2.11E-08				3.87E-08		6.00E-12		5.98E-08
EFF	(ppb[v/v])	114	785	114	2640	114	453	114	114		
7/13/2010	(g/s)	0.0006	0.0044	0.0006	0.0148	0.0006	0.0025	0.0006	0.0006	0.0006	
	Max.Conc.	0.003	0.021	0.003	0.069	0.003	0.012	0.003	0.003	0.003	
	ECR	1.77E-08	4.13E-08				1.05E-07		4.89E-11		1.64E-07
EFF	(ppb[v/v])	14	537	14	1180	27	370	14	20	14	
8/09/2010	(g/s)	0.0001	0.0030	0.0001	0.0066	0.0002	0.0021	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.014	0.000	0.031	0.001	0.010	0.000	0.001	0.000	
	ECR	2.22E-09	2.82E-08				8.56E-08		8.57E-12		1.16E-07
EFF	(ppb[v/v])	6	607	2	1820	10	284	1	9	1	
9/15/2010	(g/s)	0.0000	0.0034	0.0000	0.0102	0.0001	0.0016	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.016	0.000	0.048	0.000	0.007	0.000	0.000	0.000	
	ECR	9.00E-10	3.19E-08				6.57E-08		3.64E-12		9.86E-08
EFF	(ppb[v/v])	44	158	44	907	44	149	44	44	44	
10/22/2010	(g/s)	0.0002	0.0009	0.0002	0.0051	0.0002	0.0008	0.0002	0.0002	0.0002	
	Max.Conc.	0.001	0.004	0.001	0.024	0.001	0.004	0.001	0.001	0.001	
	ECR	6.86E-09	8.31E-09				3.45E-08		1.89E-11		4.97E-08
EFF	(ppb[v/v])	14	343	14	2080	17	240	14	18	14	
11/12/2010	(g/s)	0.0001	0.0019	0.0001	0.0116	0.0001	0.0013	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.009	0.000	0.055	0.000	0.006	0.000	0.000	0.000	
	ECR	2.14E-09	1.80E-08				5.55E-08		7.72E-12		7.57E-08
EFF	(ppb[v/v])	6	603	3	1960	17	349	4	17	1	
12/17/2010	(g/s)	0.0000	0.0034	0.0000	0.0110	0.0001	0.0020	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.016	0.000	0.052	0.000	0.009	0.000	0.000	0.000	
	ECR	9.62E-10	3.17E-08				8.08E-08		7.29E-12		1.13E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]).

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu\text{g}/\text{m}^3$) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride -- 8.80E-06

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

APPENDIX E

SUMMARY OF AIR DISPERSION MODELING AND CUMULATIVE CANCER RISK CALCULATIONS

APPENDIX E

SUMMARY OF AIR DISPERSION MODELING AND CUMULATIVE CANCER RISK CALCULATIONS

Wayne Reclamation & Recycling

The following summarizes the air modeling conducted by MWH Americas, Inc. for the Wayne Reclamation & Recycling (WRR) site in Columbia City, Indiana to assess the maximum annual average ground-level concentration (GLC) that could occur at any point outside the perimeter of the WRR site. Descriptions of the model, modeling procedures, and the results are provided below.

AIR DISPERSION MODELING PROCEDURES

The modeling was performed by utilizing the United States Environmental Protection Agency (U.S. EPA) model Industrial Source Complex – Long-Term (ISC-LT) to evaluate the ambient air impact of emissions from the site. Dispersion modeling was conducted on both the air treatment system influent and effluent in order to compare the risks associated with both treated and untreated air.

Meteorological Data

Meteorological data from 1985 was entered into the model for the Columbia City, Indiana region. Model output is highly sensitive to such data, as changes in atmospheric conditions will directly affect the ability of a discharged pollutant to disperse in the surrounding air. Meteorological data such as wind speed, wind direction, urban and rural mixing heights, Pasquill Stability Classifications (rated A to G, with G being the most stable), and ambient air temperature were converted into a binary data package. The package was then loaded into the ISC-LT model. The model then evaluated these conditions with the remaining model input parameters to identify which combinations of these conditions would result in maximum GLC of pollutants.

Emissions Source Data

The following data represents the emissions parameters at the WRR site that were entered into the model:

Stack Height	9.1 meters
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Stack Diameter	0.4064 meters
Stack Base Elevation	6.1 meters
Exhaust Temperature	73° C
Gas Exit Velocity	13.08 meters per second
Volumetric Flow Rate	1.7 cubic meters per second
Influent/Effluent Concentrations	Sampling events (See Table 14 , Progress Rpt. 3. Current data are provided in Table 9 of this report.)
Terrain	Flat
Dispersion Coefficients	Rural
Final Plume Rise	On
Stack-tip Downwash	On
Receptor Height	0 meters

Modeling Procedure

A grid was established to describe the relationship of the emission source with its surroundings, including the location of the site boundaries and any potential receptors. A Cartesian grid was established around the site to determine GLC locations.

HUMAN HEALTH RISK ASSESSMENT

The maximum concentrations determined by the air modeling study were multiplied by unit risk factors (URFs) to obtain the excess carcinogenic risk posed by the emissions through the inhalation route. The URFs used in this study were developed from toxicity values included in U.S. EPA's Integrated Risk Information System (IRIS), U.S. EPA's "Health Assessment Summary Tables" (HEAST, Annual FY-1995), and information provided by the U.S. EPA Environmental Criteria Assessment Office. The URFs assume a chronic exposure to the carcinogenic chemicals for 24 hours a day, 365 days a year, for 70 years. The URFs for the constituents of concern are:

Vinyl chloride -	8.80E-06
1,1-Dichloroethane -	1.63E-08
Trichloroethene -	2.00E-06
Tetrachloroethene -	5.90E-06

The excess cancer risk (ECR) to the maximally exposed individual can be calculated by multiplying the URF by the ambient concentration of the chemical in question. In a

residential zone, the maximally-exposed individual is assumed to be continuously exposed to the chemical for 70 years.

The maximum individual excess cancer risk (MICR) to the maximally-exposed individual due to air toxic emissions from the WRR site was calculated by multiplying the appropriate risk factor (URF) by the maximum annual GLC at the maximally-exposed individual:

$$\text{MICR} = \text{URF} * \text{GLC}$$

A summary of these calculations using concentrations generated from the model output is provided in Table 14 of Progress Report 3, and current calculations are provided in **Table 9** of this progress report.

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On June 24, 1999, air treatment was discontinued; however, monthly air sampling continues to be conducted on the effluent air stream as a means of monitoring potential risk levels associated with the untreated air stream. Effluent air sampling conducted since discontinuation of air treatment indicates the 1×10^{-6} action level has not been exceeded, with one minor exception of August 2005 (exceeded by 0.05×10^{-6}). This was due to a slight increase in the vinyl chloride concentration noted in the system effluent air stream during that month's sampling.